



## Summary

### Main Features

#### LABOUR STATISTICS NEWS

#### LABOUR THEME PAGE

The ABS **Labour Theme Page**, available on the ABS web site, provides a guide to the range of ABS statistics on the labour market, as well as links to the latest data released.

#### CHANGES TO CODING PROCESSES FOR INDUSTRY AND OCCUPATION IN THE LFS

The ABS has changed the processes used to code industry and occupation data in the Labour Force Survey (LFS). From May 2005, almost two-thirds of industry and occupation codes have been coded automatically, using a computer to match survey responses to an industry or occupation index. This process is known as **Autocoding**. The remaining industry and occupation codes are coded using a Computer Assisted Coding system, which was used for all industry and occupation coding in earlier periods.

Although no changes have been made to the classifications used, and the underlying coding methodology is unchanged, the changes to coding processes will result in an improvement in the quality of estimates classified by industry and occupation from May 2005 onwards. Aggregate estimates of employment and unemployment are unaffected, and there is no meaningful change to the level of employment classified to any industry Division or occupation Major Group.

The **Technical Report** on page 33 provides more information on the changes in coding processes.

#### UPDATED EMPLOYMENT TYPE SPREADSHEETS

Updated spreadsheets containing data of the time series on employment type, from 1992 to 2004, are now available for purchase from the ABS web site. Follow the link to [AusStats - Publications and Data], then [Data cubes]. They are listed as Table 2 under catalogue number 6105.0. These spreadsheets include estimates of employment type by sex and full-time/part-time status for each of the following variables: Age (5 year age groups), State of usual residence, Industry and Occupation.

#### FREE PUBLICATIONS ON THE WEB

ABS publications will be made available free of charge on the ABS website from 1 July. This will include Adobe Acrobat and HTML publications such as **Australian Labour Market Statistics**, and the spreadsheet **Table 1 Measures of underutilisation**.

#### SUPPLEMENTARY SURVEYS ON LABOUR TOPICS

The Monthly Population Survey comprises the Labour Force Survey and a range of supplementary surveys, which provide detailed information on a range of topics. Results from the following labour-related topics were recently released: **Labour Force Status and other Characteristics of Migrants, Australia** (cat. no. 6250.0); and **Forms of Employment, Australia** (cat. no. 6359.0). The results of these surveys are outlined in the Recent Release section of this publication.

#### ABS EMAIL NOTIFICATION SERVICE

By subscribing to this free service, you will be kept informed via email of the latest releases of ABS products. To subscribe, follow the link from the ABS home page <<https://www.abs.gov.au>>, provide your email address, and select your topics of interest.

#### Recent and upcoming statistical releases

Release date/title of publication	Reference period	Catalogue number
June 2005		
Industrial Disputes, Australia (Electronic Publication)	March quarter 2005	6321.0.55.001
Labour Force, Australia	May 2005	6202.0
Labour Force, Australia - Detailed Delivery	May 2005	6291.0.55.001
Information Paper: Wage and Salary Earners, Public Sector, Australia, Changes to Time Series Spreadsheets	March 2005	6234.0
Wage and Salary Earners, Public Sector, Australia	March quarter 2005	6248.0.55.001
Labour Force Status and Other Characteristics of Migrants, Australia	November 2004	6250.0

Survey of Income and Housing - Basic and Expanded Confidentialised Unit Record Files, Technical Paper	2002-03	6541.0
Survey of Income and Housing: Confidentialised Unit Record File on CD-ROM/RADL	2002-03	6541.0.30.001
Australians' Employment and Unemployment Patterns, 1994-1997: Expanded Confidentialised Unit Record File	1994-1997	6286.0.55.001
Australians' Employment and Unemployment Patterns: Expanded Confidentialised Unit Record File, Technical Paper	1994-1997	6286.0.55.002
Employment Arrangements and Superannuation, Australia: Confidentialised Unit Record File	2000	6361.0.55.001
Employment Arrangements and Superannuation, Australia: Confidentialised Unit Record File, Technical Paper	2000	6361.0.55.002
Job Vacancies, Australia	May 2005	6354.0
Information Paper: Job Vacancies, Australia, Changes to Time Series Spreadsheets	May 2005	6364.0
July 2005		
Australian Labour Market Statistics	July 2005	6105.0
Labour Force, Australia	June 2005	6202.0
Labour Force, Australia - Detailed Delivery	June 2005	6291.0.55.001
Australian Social Trends	2005	4102.0
Household Income and Income Distribution, Australia	2003-04	6523.0
Household Expenditure Survey, Australia: Summary of Results	2003-04	6530.0
August 2005		
Average Weekly Earnings, Australia	May 2005	6302.0
Labour Force, Australia	July 2005	6202.0
Labour Force, Australia - Detailed Delivery	July 2005	6291.0.55.001
Labour Force Experience, Australia	February 2005	6206.0
Information Paper: Census of Population and Housing - Proposed Products and Services	2006	2011.0
Labour Price Index, Australia	June quarter 2005	6345.0
September 2005		
Industrial Disputes, Australia	June quarter 2005	6321.0.55.001
Job Vacancies, Australia	August 2005	6354.0
Labour Force, Australia	August 2005	6202.0
Labour Force, Australia - Detailed Delivery	August 2005	6291.0.55.001
Labour Force Survey Standard Errors	2005	6298.0
Labour Force Survey Standard Errors, Spreadsheets	2005	6298.0.55.001
Wage and Salary Earners, Public Sector, Australia	June quarter 2005	6248.0.55.001
October 2005		
Australian Labour Market Statistics	October 2005	6105.0
Labour Force, Australia	September 2005	6202.0
Labour Force, Australia - Detailed Delivery	September 2005	6291.0.55.001

## NOTES

### CHANGES IN THIS ISSUE

In addition to presenting unemployment and underutilisation rates for people aged 15 years and older, by age, sex and state/territory, this issue of **Australian Labour Market Statistics** presents underemployment rates in tables 4.2 and 4.3.

### DATA CONTAINED IN THIS ISSUE

The statistics shown are the latest available at 22 June 2005. Data sources for the tables in this publication are listed in Appendix 1.

### ELECTRONIC PRODUCTS

The spreadsheets and data cubes referenced in this publication are available on the ABS web site at <<https://www.abs.gov.au>> [AusStats - Publications and Data], then [Data Cubes] or [Time Series Spreadsheets].

### INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Assistant Director, Labour Market Statistics Section, on Canberra 02 6252 7636.

## LABOUR MARKET SUMMARY

### KEY MEASURES

Measure		Series type	Period	Current figure	% change from	
					Previous quarter(a)	Previous year(b)
Employed						
Persons	'000	Trend	May 2005	9,983.3	0.8	3.5
Full-time	'000	Trend	May 2005	7,130.2	0.8	3.2
Part-time	'000	Trend	May 2005	2,853.1	0.8	4.2
Part-time employment as a proportion of total employment	%	Trend	May 2005	28.6	(c)0.0	(c)0.2
Unemployed						
Persons	'000	Trend	May 2005	541.0	1.2	-6.0
Looking for full-time work	'000	Trend	May 2005	382.8	0.2	-9.0
Looking for part-time work	'000	Trend	May 2005	158.2	3.6	2.2
Unemployment rate						
Persons	%	Trend	May 2005	5.1	(c)0.0	(c)-0.5
Long-term unemployment						
Persons	'000	Trend	May 2005	91.5	-6.0	-23.7
As a proportion of total unemployment	%	Trend	May 2005	16.9	(c)-1.3	(c)-3.9
Annual labour underutilisation rates(d)						
Long-term unemployment rate	%	Original	Sep 2004	1.2	na	(c)-0.1
Unemployment rate	%	Original	Sep 2004	5.5	na	(c)-0.4
Underemployment rate	%	Original	Sep 2004	5.6	na	(c)0.0
Labour force underutilisation rate	%	Original	Sep 2004	11.1	na	(c)-0.4

Extended labour force underutilisation rate	%	Original	Sep 2004	12.2	na	(c)-0.3
Children living without an employed parent(e)	%	Original	Jun 2004	17.2	na	(c)0.1
Labour force participation rate						
Persons aged 15-64 years	%	Original	May 2005	75.6	(c)0.1	(c)1.2
Total	%	Trend	May 2005	64.6	(c)0.4	(c)1.0
Actual hours worked						
Aggregate weekly hours	mill. hours	Original	May 2005	345.4	-0.6	3.4
Average weekly hours - Persons	hours	Original	May 2005	34.6	-1.6	0.0
Average weekly hours - Full-time	hours	Original	May 2005	42.0	-0.5	0.0
Average weekly hours - Part-time	hours	Original	May 2005	16.6	-2.1	0.7
Part-time workers						
Proportion who preferred to work more hours	%	Original	May 2005	25.1	(c)-1.2	(c)-0.7
Wage price index						
Total hourly rates of pay excluding bonuses	index no.	Trend	Mar qtr 2005	104.3	1.1	3.9
Average weekly earnings						
Full-time adult ordinary time earnings	\$	Trend	Feb 2005	991.20	1.5	4.8
All employees total earnings	\$	Trend	Feb 2005	781.70	1.6	4.5
Compensation of employees						
Household income account	\$m	Trend	Mar qtr 2005	102,015	1.7	7.0
Average earnings (National Accounts basis - nominal) per week	\$	Trend	Mar qtr 2005	909	1.0	3.7
Industrial disputes						
Working days lost	'000	Original	Mar qtr 2005	44.4	-14.6	-44.8
Working days lost per 1,000 employees	number	Original	Mar qtr 2005	5.2	-15.3	-46.7
Job vacancies						
Australia	'000	Trend	Feb 2005	145.2	5.8	29.8

na not available

(a) Same period previous quarter (monthly data is presented for the middle month of each quarter).

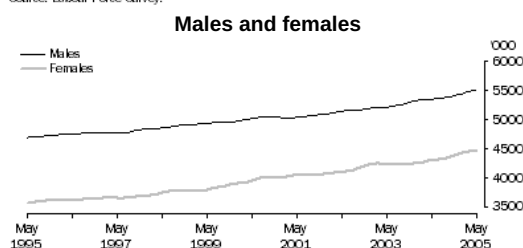
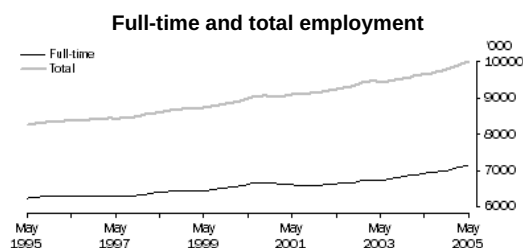
(b) Same period previous year.

(c) Change is in percentage points.

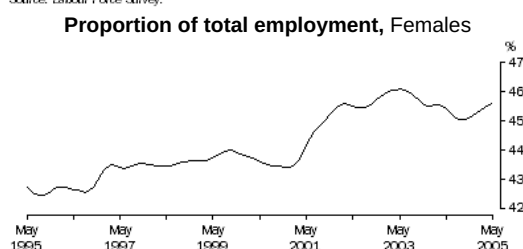
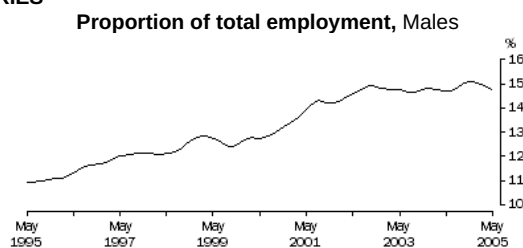
(d) See table 4.1 or the Glossary for further explanation of labour underutilisation rates.

(e) As a proportion of all children aged under 15 years. See the Explanatory Notes for information on family data.

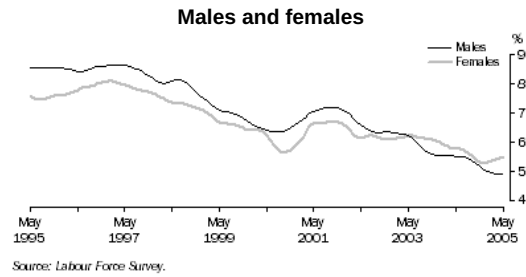
## EMPLOYMENT: TREND SERIES



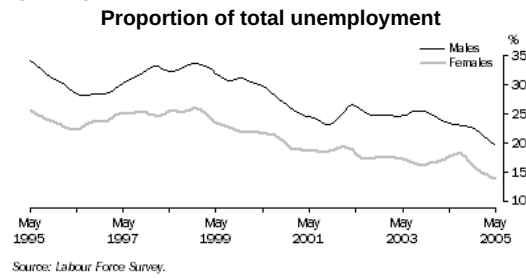
## PART-TIME EMPLOYMENT: TREND SERIES



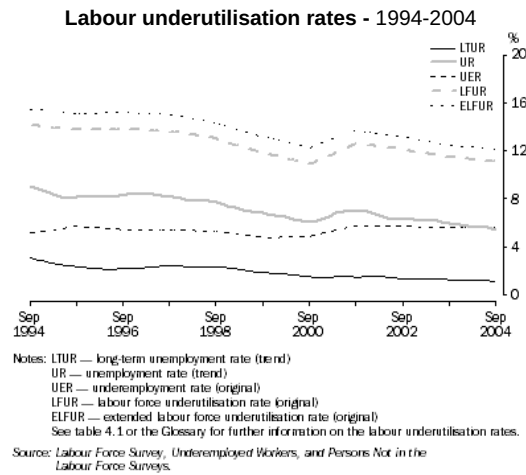
UNEMPLOYMENT RATE: TREND SERIES



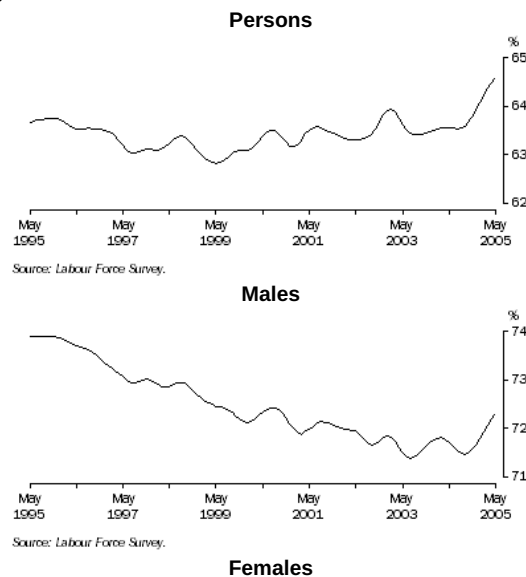
LONG-TERM UNEMPLOYMENT: TREND SERIES



UNDERUTILISED LABOUR



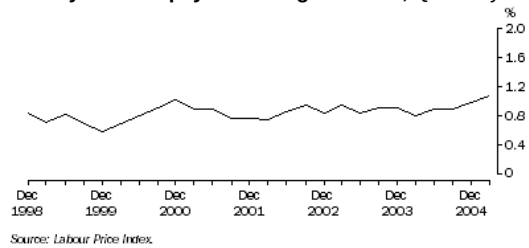
PARTICIPATION RATE: TREND SERIES





## WAGE PRICE INDEX: TREND SERIES

Total hourly rates of pay excluding bonuses, Quarterly change

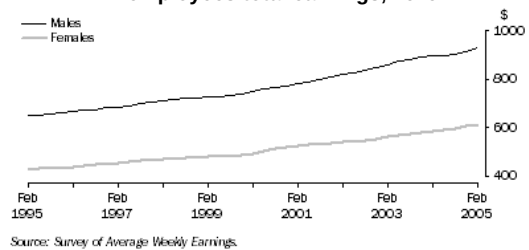


## AVERAGE WEEKLY EARNINGS: TREND SERIES

Full-time adult ordinary time earnings, Quarterly change

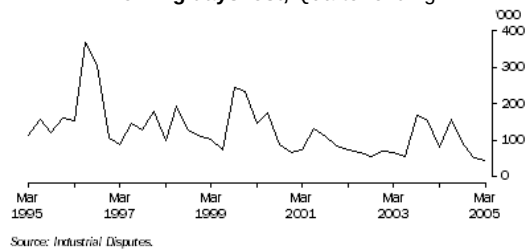


All employees total earnings, Level



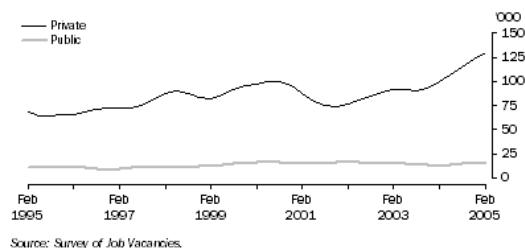
## INDUSTRIAL DISPUTES: ORIGINAL SERIES

Working days lost, Quarter ending



## JOB VACANCIES: TREND SERIES

Job vacancies, By sector



## List of Tables

The tables listed below are included in the publication **Australian Labour Market Statistics** (cat. no. 6105.0). Electronic sources of the data in these tables can be found in **Appendix 1**.

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## About this Release

### ABOUT THIS RELEASE

Replaces: Labour Force, Australia 6203.0

This publication is the flagship release for all ABS labour statistics. It draws together data from a range of sources, mostly ABS household and business surveys, to provide an overall picture of the labour market. The key purpose of this publication is to raise awareness of the data available, so that users will be able to use it more effectively.

It contains tables for core data items, presenting the most recent data available at a particular date (rather than relating to a particular reference period). It is also able to be used to announce the release of supplementary surveys and infrequent surveys. Note that, in addition

to a brief article in this publication, these would also have separate releases, which would not be delayed by the release in this publication.

The publication is also used to release annual data on Indigenous labour force status, and annual supplementary measures of labour underutilisation. It includes a range of feature articles, both analytical and technical, which will assist users in understanding and interpreting the data and will also promote the range of data available from the ABS labour statistics program. It will be used to announce any changes to labour series or releases.

The publication contains brief explanatory notes, outlining each data source, but referring to the relevant releases, and to Labour Statistics: Concepts, Sources and Methods 6102.0, for more detail.

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## Technical Report: Changes to coding processes for industry and occupation in the Labour Force Survey (Feature Article)

### Technical Report: Changes to coding processes for industry and occupation in the Labour Force Survey

#### INTRODUCTION

The ABS has changed the processes used to code industry and occupation data in the Labour Force Survey (LFS). These changes were introduced for the May 2005 survey.

Although no changes have been made to the classifications used, and the underlying coding methodology is unchanged, the changes to coding processes will result in an improvement in the quality of estimates classified by industry and occupation from May 2005 onwards. Aggregate estimates of employment and unemployment are unaffected, and there is no meaningful change in the level of employment classified to any industry Division or occupation Major Group.

The following describes the changes in coding processes.

#### INDUSTRY

LFS industry data are classified according to the **Australian and New Zealand Standard Industrial Classification (ANZSIC), 1993** (cat. no. 1292.0) and are coded at the ANZSIC Group (3 digit) level. These data are collected in the mid month of each quarter (i.e. February, May, August, and November).

The LFS currently asks each employed person to provide, for their main job, a description of the industry, business or service where they work, and the name and address of their employer or business.

#### OCCUPATION

In the LFS, occupation data are collected for all employed people in the mid-month of each quarter. Responses are classified according to the ASCO - **Australian Standard Classification of Occupations, Second Edition** (cat. no. 1220.0), at the ASCO Unit Group (4 digit) level.

The LFS asks each employed person to describe, for their main job, the job title and their main tasks or duties.

#### CODING PROCESSES

##### Computer assisted coding

The computer assisted coding (CAC) system was used for coding all records prior to May 2005. In this system, the basic and qualifying words from the details supplied are typed in and a computer searches a list to find a match to an industry or occupation. If no unique match can be made, the coder will be presented with a list of possible matches. The computer also indicates the steps required to make a match. The coder then selects the best match and the computer assigns the appropriate industry or occupation classification code.

##### Autocoding

From May 2005, industry and occupation codes are coded automatically by a computer matching the survey responses to an industry or occupation index. Where the autocoding (AC) system is unable to allocate a valid code to a record, the record is then passed on to the CAC system for coding. The AC system saves time, and improves accuracy and consistency.

#### IMPACT ON ESTIMATES

This change in procedure has the potential to affect estimates of employment and unemployment classified by industry or occupation.

In order to analyse the effect of the change, dual coding using both methods was conducted on the August 2004, November 2004, and February 2005 surveys. Results of analysis conducted on these surveys suggest that AC produces a valid code in about 63% of records for occupation and 58% of records for industry. The remainder of the records are coded using CAC.

Of those records coded by AC during the dual coding exercise, approximately 86% of occupation codes and 90% of industry codes had been allocated the same codes as CAC. Of those records where AC and CAC had allocated different codes, AC achieved lower error rates (1.8% for industry and 3% for occupation) compared to the CAC system (8% for industry and 11% for occupation). Records were treated as being incorrect if the same code would not have been obtained had the coding rules been strictly followed.

Analysis of estimates of employed people at the industry Division and occupation Major Group level showed that in a small number of cases there were statistically significant differences. These differences were inconsistent across the months analysed, and were so small and variable, that application of adjustment factors is not warranted.

#### **'Not further defined' codes**

Where there is insufficient detail collected from the survey respondent to allocate the most detailed level of occupation or industry code, 'not further defined' codes (also known as 'nfd' codes) are used. The incidence of occupation and industry nfd codes was reduced by the use of the AC system over the three months in the dual coding analysis. Industry nfd code use was reduced by approximately 15% under AC, while the use of occupation nfd codes was reduced by approximately 23% under AC.

Between February and May 2005, the incidence of nfd codes in estimates of employed people classified by industry decreased by 28% from 588,200 to 424,900 people. Over the same period, the incidence of nfd codes in occupation estimates decreased by 39%, from 234,600 to 142,100 people.

#### **FURTHER INFORMATION**

For more information about Labour Force Survey estimates classified by industry or occupation, contact the Assistant Director, Labour Household Surveys on Canberra 02 6252 6565. For email enquiries, please contact Client Services on [client\\_services@abs.gov.au](mailto:client_services@abs.gov.au).

## **Spotlight: Employee share schemes (Feature Articles)**

### **Spotlight: Employee share schemes**

#### **INTRODUCTION**

Providing benefits in addition to regular wages or salary is a common way for employers to remunerate their employees. Benefits are goods, services, concessions, allowances or other privileges provided to employees, in addition to wages or salary.

One increasingly common type of employment benefit is providing employees with shares, share rights or options in the employer's business. A share right, or option, is a contractual right to acquire shares in the future, at a set price. The shares are issued when the employee exercises this right to the shares.

These arrangements, where employees receive shares (including share rights or options) in the employer's business as an employment benefit, are often referred to as 'employee share schemes'.

Employee share schemes are designed to encourage employees to invest in the business they work in, both financially and in terms of increased commitment. The schemes provide a link between corporate and individual performance and can therefore provide extra motivation for employees. Employee share schemes are therefore considered to benefit both the employer and the employee.

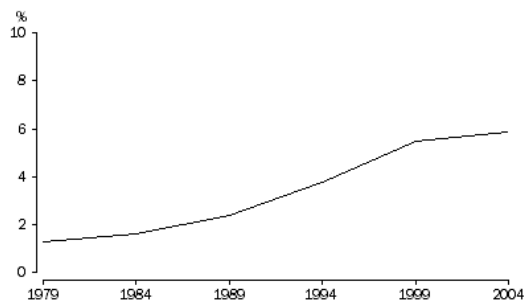
This article uses estimates from the Survey of Employee Earnings, Benefits and Trade Union Membership to show how the incidence of employees receiving shares as an employment benefit has increased over time. It then looks at the characteristics of employees who received shares as an employment benefit in August 2004.

#### **EMPLOYEES RECEIVING SHARES AS AN EMPLOYMENT BENEFIT**

Over the last twenty-five years it has become more common for employers to provide shares as an employment benefit. In 1979, the proportion of employees who received shares as an employment benefit was 1.3%, but by 2004 this had increased to 5.9% of employees. Most of the increase occurred between 1989 and 1999, with the proportion increasing from 2.4% to 5.5% during this period.

##### **1. Proportion of employees receiving shares**





## CHARACTERISTICS OF EMPLOYEES RECEIVING SHARES AS AN EMPLOYMENT BENEFIT

In August 2004, 299,000 male employees and 182,300 female employees received shares as an employment benefit in their main job. This represents 6.9% of all male employees and 4.8% of all female employees. A higher proportion of full-time employees received shares as an employment benefit than part-time employees (7.0% compared to 3.4%).

### 2. Employees receiving shares as an employment benefit - August 2004

	Males %	Females %	Persons %
Full-time	7.8	5.6	7.0
Part-time	2.0	3.9	3.4
Total	6.9	4.8	5.9

The proportion of employees who received shares as an employment benefit was higher for trade union members than employees who were not trade union members (8.5% compared to 5.3%). It was also higher for owner managers of incorporated enterprises than other employees (12.0% compared to 5.4%).

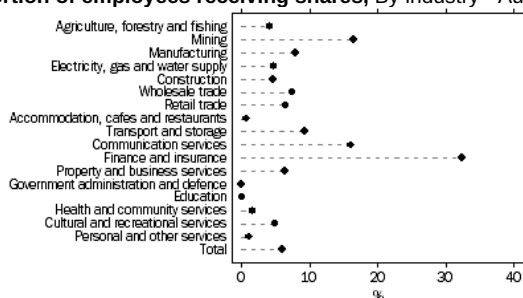
The proportion of employees receiving shares as an employment benefit also varied across industries and occupations.

### Industry

The Finance and insurance industry had the highest proportion of employees who received shares as an employment benefit (32%), followed by Mining (16%) and Communication services (16%). While only 4% of employees worked in Finance and insurance, this industry accounted for 21% of all employees who received shares as an employment benefit.

The proportions of employees in the Mining and Communication services industries who received shares as an employment benefit were also relatively high (16% in each), yet these industries only accounted for 3% and 5% of all employees who received shares as an employment benefit. In contrast, only 8% of employees in Manufacturing received shares as an employment benefit, yet this industry accounted for 16% of all employees who received shares as employment benefit.

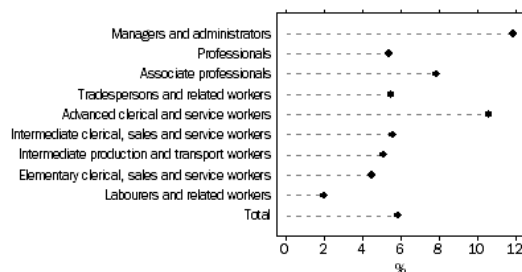
### 3. Proportion of employees receiving shares, By industry - August 2004



### Occupation

The occupations with the highest proportions of employees who received shares as an employment benefit were Managers and administrators (12%), Advanced clerical and service workers (11%) and Associate professionals (8%). While only 7% of all employees were in the Managers and administrators group, this group accounted for 14% of all employees who received shares as an employment benefit.

### 4. Proportion of employees receiving shares, By occupation - August 2004

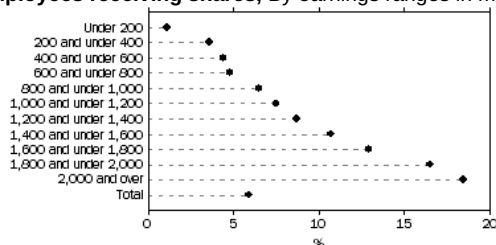


## MEAN WEEKLY EARNINGS

Employees who receive shares as an employment benefit generally have higher earnings than those who do not receive shares as an employment benefit. This reflects the high proportion of employees receiving shares in industries where employees have high earnings (i.e. Finance and insurance, and Mining). Mean weekly earnings in main job (excluding the value of benefits) of employees who received shares as an employment benefit were 49% higher than those who did not receive shares (\$1,096 compared to \$737).

The correlation between mean weekly earnings and the receipt of shares as an employment benefit can also be seen when looking at earnings ranges. The proportion of employees who received shares as an employment benefit was highest for employees with weekly earnings of \$2,000 and over, and lowest for employees with weekly earnings of under \$200.

### 5. Proportion of employees receiving shares, By earnings ranges in main job - August 2004



## FURTHER INFORMATION

For further information on these statistics please contact Assistant Director, Labour Market, on Canberra 02 6252 5514. For email enquiries, please contact Client Services on [client.services@abs.gov.au](mailto:client.services@abs.gov.au)

## Full-time and part-time participation in the Australian labour force: a cohort analysis (Feature Article)

### Full-time and part-time participation in the Australian labour force: a cohort analysis

#### INTRODUCTION

The increase in the proportion of people participating part-time in the labour force over the past 25 years has attracted a great deal of interest from researchers and policy analysts. In 1978, 15% of the labour force was participating part-time compared to 29% in 2004. Patterns of part-time and full-time participation are related to stages of the lifecycle. For example, the decision to work part-time or full-time will tend to be related to participation in education, family commitments or the work to retirement transition. These types of events are more commonly associated with certain age groups.

Different cohorts may also have different attitudes, expectations and experiences that will affect their part-time and full-time participation rates regardless of age. In this article a cohort is defined as a group of people who were born during the same calendar year.

This article examines the effects that age, year and cohort have on part-time and full-time participation. The analysis tracks the part-time and full-time participation rates of successive birth cohorts over time, using data from the Labour Force Survey between 1981 and 2004. A regression-based decomposition analysis is used in this article to separate full-time and part-time labour force participation into three distinct components - the cohort effect, the age effect and the year effect. This is an extension of work published by the ABS in the July 2003 edition of **Australian Labour Market Statistics** (cat. no. 6105.0) titled '**Unemployment and Participation in Australia: a Cohort Analysis**'.

The article firstly examines the concepts, data and methodology used in the analysis. This is followed by a discussion of the results.

#### COHORT ANALYSIS

The analysis is restricted to cohorts aged between 18 and 60 in each year. In each year, a new cohort of people turns 18 and enter the scope of the analysis, and another cohort turns 60 and leave the scope of the analysis. Since the analysis starts at 1981, and cohorts appear

in the analysis for a minimum of nine years (to allow enough observations for the analysis), the oldest cohort is the 1929 cohort. This cohort appears in the analysis from 1981 (when they turn 52) until 1989 (when they turn 60). The last new cohort used in the analysis is the cohort born in 1978. This cohort appears in the analysis in 1996 and disappears after 2004, again giving us nine observations for analysis. This is illustrated in Figure 1.

**1. Example of cohorts entering and exiting the model**

		YEAR						
		1988	1989	1990	→	1996	1997	1998
					BIRTH YEAR			
	18	1970	1971	1972		1978	..	..
A	19	1969	1970	1971		1977	1978	..
G	20	1968	1969	1970		1976	1977	1978
E								
	58	1930	1931	1932		1938	1946	1947
	59	1929	1930	1931	→	1937	1945	1946
	60	..	1929	1930		1936	1944	1945

A minimum of nine observations is set as it allows enough observations for the model to safely distinguish a cohort effect from the other two effects. The use of nine observations was settled upon through the analysis of different models.

The analysis (a regression-based decomposition analysis) separates the effects of three distinct components that could influence full-time and part-time labour force participation - the age effect, the cohort effect and the year effect.

### Age effect

This is the effect that a person's age had on their chances of participating in the labour force, either part-time or full-time (whatever the year or their cohort). The age effect captures movements over the lifecycle. Younger people experience higher levels of part-time participation than those in the prime working age groups. Their part-time participation rates decline as people leave education and gain work experience. Full-time participation rates are expected to move in the opposite direction.

### Cohort effect

This is the effect that the cohort into which a person was born had on their chances of participating in the labour force either part-time or full-time (whatever the year and whatever their age). The cohort effect captures movements in part-time and full-time participation that are exclusive to particular cohorts over the whole period. For example, women born in the 1950s have had different labour market experiences to those born in the 1970s.

### Year effect

This is the effect that the year had on any individual's chances of participating in the labour force part-time or full-time (whatever their age or cohort). The year effect captures movements or one off 'shocks' that affect all cohorts. For example, in a year of low economic growth the employment levels of all cohorts may be affected. The year effect cannot be considered in isolation. Instead, the year effect can be considered a residual after the cohort and the age effects have been accounted for.

### Method

In year Y, the probability that an individual of age A and belonging to cohort C, will participate in the part-time labour force (or in the full-time labour force) can be decomposed into three effects:

year effect (for year Y) + age effect (for age A) + cohort effect (for cohort C)

The age effect represents the difference between the rate for a particular reference age (the reference age used in this article is 18 years) (**end note 1**) and the rate for other ages. The cohort effect represents the difference between the cohort reference group (people born in 1954) and the rate for other cohorts. The year effect represents the difference between the rate for a particular year and the average rate for the period.

For more details about the method of analysis please refer to Deaton, A. (1997).

### Part-time and full-time participation rates

The analysis presented in this article is based on part-time and full-time participation rates for each cohort in each year. The participation rates for each group are calculated as:

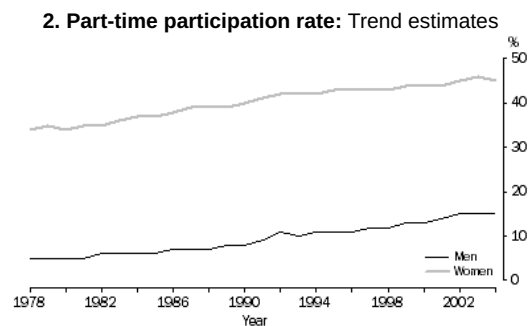
**Part-time (end note 2) participation rate** = (number of people in part-time employment + number of unemployed people looking for part-time employment) / total number of people

and

**Full-time (end note 3) participation rate** = (number of people in full-time employment + number of unemployed people looking for full-time employment) / total number of people

Together the part-time and full-time participation rates sum to the labour force participation rate.

In 1978, 5% of men and 34% of women in the labour force were part-time. By 2004, this had grown steadily to 15% and 45% of the labour force for men and women respectively. This is illustrated in Graph 2.



## THE EFFECT OF AGE

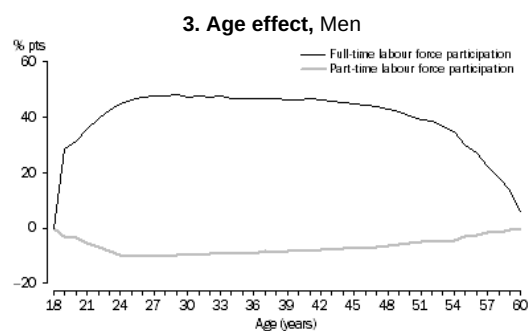
Age has the strongest of all of the three effects on both full-time and part-time participation. Graphs 3 and 4 show that the relationship between age and full-time and part-time participation is very different for men and women. There is a strong life-cycle pattern for both sexes.

### Men

Graph 3 shows the relationship between age and full-time and part-time participation for men. The coefficients of the age effect are expressed in percentage point changes from the average participation of 18 year olds during the period. So 19 year olds have a full-time participation rate which is 29 percentage points higher than the rate for 18 year olds.

Full-time participation rises quickly for men during their twenties, peaking at age 29. There is then a slow and steady decline in full-time participation until men reach their 50s, when the decline becomes far more rapid.

To some extent the part-time age effect moves in the opposite direction to the full-time age effect. Part-time participation is lowest at age 28. There is a very gradual increase in part-time participation with age. As men get older, some may withdraw from full-time work and maintain contact with the labour force through part-time work.



### Women

Graph 4 shows that the relationship between age and both full-time and part-time participation for women is very different to that of men. Female full-time participation falls quite rapidly with age as women enter their peak child-bearing years (age 25-34) (**end note 4**). There appears to be some relationship between declining full-time and rising part-time participation rates over these years, reflecting the fact that many women combine child-raising with part-time employment.

Part-time participation remains relatively high and fairly steady from around age 36 to 53, compared with women aged 18. Full-time participation increases from age 36 to age 50. These participation patterns are consistent with increasing numbers of women returning to the labour force or working longer hours as their children get older. Full-time participation declines quite quickly after age 50. Part-time participation also declines at a faster rate after age 53.

## 4. Age effect, Women



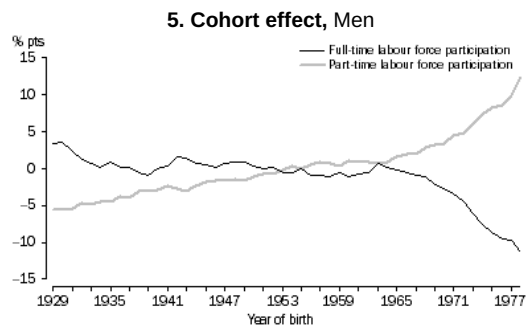
## THE EFFECT OF THE COHORT

### Men

The coefficients of the cohort effect are expressed as percentage point changes from the average participation of the 1954 cohort (the middle cohort) during the period. For example, the 1929 cohort has a part-time participation rate which is five percentage points lower than the 1954 cohort.

Graph 5 clearly shows that after controlling for age and year effects, earlier cohorts of men were more likely to participate full-time than later cohorts. In fact, men born in 1929 had full-time participation rates which were 8.5 percentage points higher on average (between 1981 and 2004) than men born in 1978.

Later cohorts of men are more likely to participate part-time than their earlier counterparts. Men born in 1929 had part-time participation rates which were 18.3 percentage points lower on average than men born in 1978.



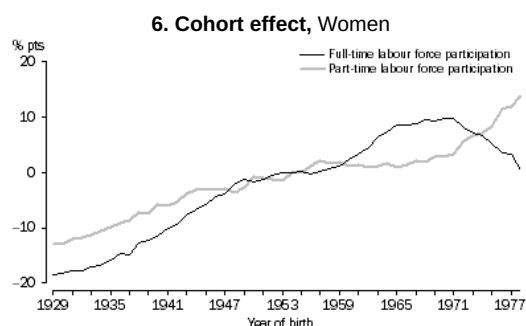
From around the 1965 cohort there appears to be a more rapid divergence between the full-time and part-time cohort effects with part-time labour force participation increasing and full-time participation decreasing. This may indicate increased preferences and/or opportunities for part-time employment among the later cohorts.

There is not a clear understanding of why these changes are occurring to men's participation. Possible influences include: changing roles of men in families; structural and workplace changes in the economy; the trend towards students working part-time while studying; and the overall increase in participation in further education during the past twenty years (**end note 5**). These factors are known to have affected women's part-time participation rates as well.

### Women

Graph 6 shows that later cohorts of women are more likely to participate (both full-time and part-time) than the earlier cohorts. Full-time and part-time participation generally increased for successive cohorts up until the 1959 cohort. After this cohort there was a strong increase in full-time participation for each successive cohort, until the 1970 cohort. From this cohort on there is a fall in full-time participation.

Part-time participation remained relatively unchanged for each cohort born between 1960 and 1970. From the cohorts born in the early 1970s part-time participation increased. A similar trend is evident in the male cohort effect.



This pattern in the cohort effect is likely to be the result of the interaction of a number of factors. For example, increased access to education (and women wanting to gain a return on their investment in their education) and changing social attitudes towards women, such as a greater general acceptance of women in work, are likely to have contributed to the increase in the participation of women in the labour force over the period. In addition, the labour market has changed with the increased availability of part-time jobs and the opportunity to combine work and study.

## THE YEAR EFFECT

The year effects for men for both part-time and full-time participation are not statistically significant. That is, on average over the period, the year does not significantly affect male participation in either full-time or part-time participation, although the year can certainly affect employment among men. As a result the year effect coefficients are not presented in this article.

The year effect for women participating full-time is also not statistically significant. The part-time year effect is statistically significant, but when compared to the other two effects the year effect is quite small. The largest effect is 1.5 percentage points for part-time participation in 1990. Women's part-time participation appears to be more strongly influenced by the economic cycle than men's participation or women's full-time participation. This may reflect a propensity among these women to leave the labour force rather than remain unemployed when jobs become harder to find.

## SUMMARY

There is a strong lifecycle pattern to part-time and full-time participation rates for both men and women, although these patterns show clear gender differences. The effect of the lifecycle on women's full-time and part-time participation reflects family formation and child-bearing. Part-time participation rates are high for women of peak child-bearing ages who are combining work with family commitments, while full-time participation rates are particularly low at these ages.

People from different cohorts have very different patterns of part-time and full-time participation. Later cohorts of women tend to have higher rates of both part-time and full-time participation than earlier cohorts did, regardless of age. Men from later cohorts have higher part-time participation rates than men from earlier cohorts did. However, full-time participation rates for later male cohorts have fallen by more than part-time participation rates have risen.

## END NOTES

1. These reference groups have been chosen to allow easy interpretation of the results. However, any group could be used as the reference group without changing the outcome of the analysis. For example, if 18 is the reference age and participation at age 19 is 15% higher, and at age 20 is 20% higher, then if we used age 19 as the reference, age 18 would have participation 15% lower and age 20 would have participation 5% higher. [< Back](#)
2. People who usually work less than 35 hours a week (in all jobs). [< Back](#)
3. People who usually work 35 hours or more a week (in all jobs). [< Back](#)
4. Until 2000, age specific fertility rates were consistently highest for the 25-29 year age group. After this point women aged 30-34 years experienced the highest fertility of all age groups (ABS 2001). [< Back](#)
5. Australian Bureau of Statistics (ABS) (2005), '**Labour Force Participation in Australia**', **Australian Labour Market Statistics, January 2005**, pp 10-18 (cat. no. 6105.0), ABS, Canberra and '**Changes across Australian generations**', **Australian Social Trends 2002 edition**, pp 46-51 (cat. no. 4102.0), ABS, Canberra. [< Back](#)

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Australian Bureau of Statistics (ABS) (2001), **Births, Australia** (cat. no. 3301.0), ABS, Canberra.

Australian Bureau of Statistics (ABS) (2005), '**Labour Force Participation in Australia**', **Australian Labour Market Statistics, January 2005**, pp 10-18 (cat. no. 6105.0), ABS, Canberra.

Australian Bureau of Statistics (ABS) (2003), '**Unemployment and Participation rates in Australia: A Cohort Analysis**', **Australian Labour Market Statistics July 2003**, pp 16-21 (cat. no. 6105.0), ABS, Canberra.

Australian Bureau of Statistics (ABS) (2002), '**Changes across Australian generations**', **Australian Social Trends 2002 edition**, pp 46-51 (cat. no. 4102.0), ABS, Canberra.

Deaton, A., (1997), '**The analysis of household surveys : A microeconomic development policy**', Johns Hopkins University Press, Baltimore.

Ravindirian, R., Rawnsley, T. and Jose, A. 2002, 'A cohort analysis of unemployment rates for Australia', Analytical Services Branch, Australian Bureau of Statistics, paper presented at the 31st Annual Conference of Economists, September 2002, Adelaide.

## Population, participation and productivity: contributions to Australia's economic growth (Feature Article)

### Population, participation and productivity: contributions to Australia's economic growth

#### INTRODUCTION

Economic growth has been described as the increasing ability of an economy to satisfy the wants and needs of its people over time (Parry and Kemp, 2002). As production and incomes in the economy rise, material living standards and other aspects of life are affected. The interaction of a number of factors contributes to economic growth, and these include rising population, increasing inputs such as labour and capital, labour productivity growth and technological progress.

There are many ways to measure economic growth. The simplest way is to compare gross domestic product (GDP) (**end note 1**) from year to year. A more useful way to measure economic growth is to compare real GDP (**end note 2**) per person from year to year. This measure relates the real output of the economy to the number of people who produce and consume that output.

This article explores Australia's economic growth over the decade from March 1994 to March 2004. The analysis focuses on five components of economic growth derived from the following identity:

Real GDP / Population (real GDP per person)

= Real GDP / Hours worked (commonly called labour productivity)

x Hours worked / Employed persons (average hours worked per employed person)

x Employed persons / Labour force (employment rate)

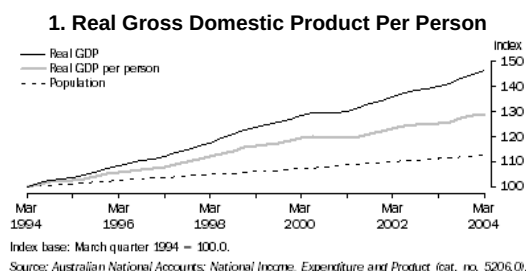
x Labour force / Population aged 15 years and over (participation rate)

x Population aged 15 years and over / Population (proportion of the population aged 15 years and over)

Each of these components is examined in more detail in the following sections. For definitions of these terms, see the endnotes.

#### ECONOMIC GROWTH IN AUSTRALIA

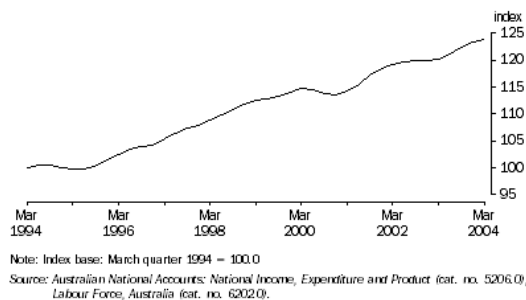
Following the downturn of the early 1990s, Australia experienced more than a decade of sturdy economic growth. Between the March quarter 1994 and the March quarter 2004, the average rate of growth in real GDP was 3.9% a year. Over the same period, the Australian population grew at an average rate of 1.2% a year, leading to a growth in real GDP per person of 2.6% a year.



#### LABOUR PRODUCTIVITY

Labour productivity is the relationship between hours worked (**end note 3**) and output. Increases in labour productivity can reflect technological advances, increased education and training, increased competition, improvements in production methods within firms, and the shift of labour and capital towards firms or industries that are more efficient. Productivity growth is a key driver of real economic growth in the long term.

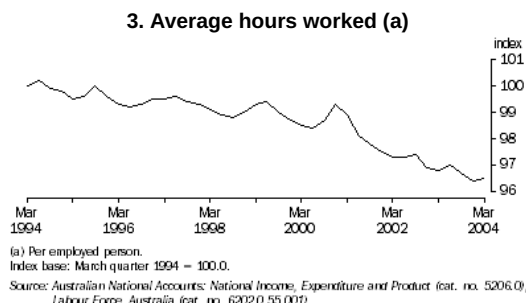
#### 2. Real Gross Domestic Product per hour worked



Between March 1994 and March 2004, labour productivity (measured by real GDP per hour worked) rose by more than 24% - an annual average growth of 2.1%.

## AVERAGE HOURS WORKED

The ratio between total hours worked and the number of employed people is known as average hours worked per employed person. Increases in average hours worked per employed person may lead to increases in total production, which in turn may contribute to economic growth, although this is not necessarily the case. Growth or decline in average hours worked is largely influenced by the proportion of part-time workers.

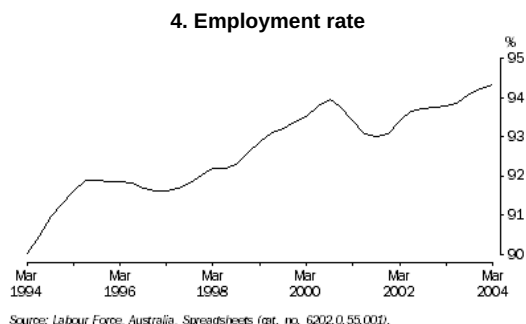


Between March 1994 and March 2004, the average hours worked by employed people fell by 3% - an annual average fall of 0.4%.

The decline in average hours worked was mainly driven by large increases in the number of part-time workers. Between March 1994 and March 2004 the number of part-time workers rose by 44.9%, compared to an increase of 15.8% in the number of full-time workers.

## EMPLOYMENT RATE

The proportion of employed people in the labour force is referred to as the employment rate. An increase in the employment rate (or a decrease in the unemployment rate) can contribute to economic growth by increasing total production, income and expenditure. A rise in the employment rate generally reflects more buoyant labour market conditions.



Between March 1994 and March 2004 the employment rate rose from 90.0% to 94.3%, an increase of 4.3 percentage points, making a positive contribution to economic growth. Over the ten year period the employment rate averaged an annual growth of 0.5%.

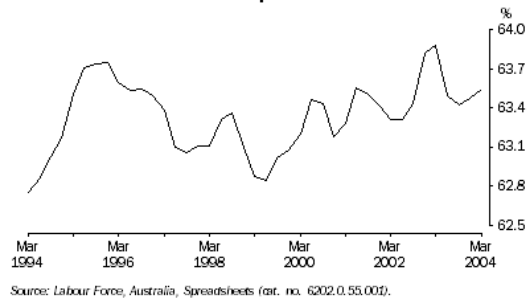
Strong growth in the employment rate was evident for both men and women - up by 4.9 and 3.5 percentage points respectively.

## PARTICIPATION RATE



The participation rate is the labour force expressed as a percentage of the civilian population aged 15 years and over. It represents the proportion of the population who are either in a job or actively seeking work. An increase in the participation rate reflects a greater proportion of the working age population available to work, which can contribute to economic growth by increasing the effective labour supply.

### 5. Participation rate



Between March 1994 and March 2004, the labour force participation rate rose from 62.8% to 63.5% - an annual average growth of 0.1%.

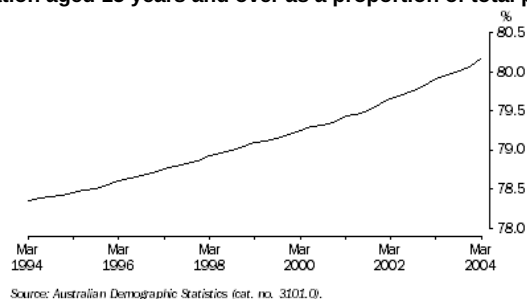
Over the ten year period, participation rates for men and women moved in opposite directions. The participation rate for men fell over the period - down 1.7 percentage points to 71.8%. Conversely, the participation rate for women rose 3.3 percentage points to 55.6%. Greater female participation in the labour force has been cited as the major driving force behind the increase in participation rates over the last 25 years (Productivity Commission, 2004).

### PROPORTION OF THE POPULATION AGED 15 YEARS AND OVER

The population aged 15 years and over represents the maximum potential size of the labour force within this age range. An increase in the proportion of the population within this age range may indicate that relatively more of the population is available to work, and can contribute to economic growth by increasing the size of the labour force, which in turn can increase total production and lead to higher per person incomes.

An increase in the proportion of the population aged 15 years and over may also reflect the ageing of the population. This trend, which is evident in Australia, may constrain future economic growth as a greater number of workers retire, reducing growth within the labour force.

### 6. Population aged 15 years and over as a proportion of total population



Over the ten years from March 1994 to March 2004, the proportion of the population aged 15 years and over increased from 78.4% to 80.2% - an annual average growth of 0.2%.

### CONCLUSION

The average annual rate of economic growth (measured by real GDP per person) is approximately equal to the sum of the average annual rate of increase in the five components. Analysis of these five components between March 1994 and March 2004 reveals that improvements in labour productivity made the largest contribution to the increase in Australia's real GDP per person (contributing 2.1 percentage points to the 2.6% rise). Other components contributing to Australia's economic growth were increases in the employment rate and the proportion of the population aged 15 years and over (contributing 0.5 and 0.2 percentage points respectively). The slight increase in the participation rate had a negligible effect on economic growth (contributing 0.1 percentage points), while the only component not to contribute to Australia's economic growth over the decade was average hours worked (which fell by an average of 0.4% a year).

### 7. Contribution of components to economic growth(a) - March 1994 to March 2004

Component	Average annual growth rate %
Real GDP / Hours worked (labour productivity)	2.1
Hours worked / Employed persons (average hours worked)	-0.4
Employed persons / Labour force (employment rate)	0.5
Labour force / Population aged 15 and over (participation rate)	0.1
Population aged 15 and over / Population	0.2
<b>Real GDP / Population</b>	<b>2.6</b>

(a) Average annual growth rates.

Over the coming decades the ageing of Australia's population and a projected slowing in the rate of population growth are expected to affect the nation's economic growth. The components of the above decomposition most likely to be affected by the population changes are average hours worked and the participation rate, as people get older and move into part-time work or out of the labour force.

## FURTHER INFORMATION

For further information, please contact the Director, Capital, Production and Deflators on 02 6252 6713. For email enquiries, please contact Client Services on [client.services@abs.gov.au](mailto:client.services@abs.gov.au).

## REFERENCES

Parry, G. and Kemp, S. 2002, **Exploring Macroeconomics**, Tactic Publications, Perth.

Productivity Commission 2004, **Economic Implications for an Ageing Australia**, Draft Research Report, Productivity Commission, Canberra.

## ENDNOTES

1. Gross domestic product (GDP) is the total market value of goods and services produced in Australia within a given period, after deducting the cost of goods and services used up in the process of production, but before deducting allowances for the consumption of fixed capital. See **Australian National Accounts: National Income, Expenditure and Product** (cat. no. 5206.0) for more information. <Back

2. Real GDP is GDP at market prices, adjusted for price changes. The ABS measures real GDP using chain volume estimates. Chain volume estimates of GDP are derived by revaluing current price, income-based estimates of GDP, using deflators which are calculated from the expenditure components of the series concerned. < Back

3. Hours worked are derived by multiplying average hours worked published in **Labour Force, Australia, Detailed - Electronic Delivery** (cat. no. 6291.0.55.001) by employment data. Estimates of employment are derived as the sum of civilian employment and defence force personnel. See **Australian System of National Accounts: Concepts, Sources and Methods** (cat. no. 5216.0) for more information. < Back

# Explanatory Notes

## Explanatory Notes

### INTRODUCTION

**1 Australian Labour Market Statistics** brings together a range of ABS labour statistics to present a statistical summary of the Australian labour market. It has been developed primarily as a reference document, and provides a broad basis for labour analysis and research.

**2** In addition to data from the Labour Force Survey (LFS), this publication contains statistics from a range of other ABS labour surveys including Average Weekly Earnings, the Labour Price Index, Job Vacancies, Employment and Earnings - Public Sector, and Industrial Disputes. The publication also includes summary data from recently released labour force supplementary surveys.

**3** This publication includes international data for selected labour market indicators.

### LABOUR STATISTICS CONCEPTS, SOURCES AND METHODS

**4** The concepts and definitions underpinning ABS labour statistics align closely with the standards and guidelines set out in Resolutions of the International Conference of Labour Statisticians. Descriptions of the underlying concepts of Australia's labour market statistics, and the sources and methods used in compiling the estimates, are presented in **Labour Statistics: Concepts, Sources and Methods** (cat. no. 6102.0.55.001), which is available on the ABS web site at <<https://www.abs.gov.au>> [Themes - People - Labour - **Labour Statistics: Concepts, Sources and Methods**].

**5** For an explanation of terms used in this publication, refer to the Glossary.

### LABOUR STATISTICS THEME PAGE

**6** The Labour Statistics theme page is a portal to all labour statistics and related information residing on the ABS web site. The page contains hyperlinks to **Labour Statistics: Concepts, Sources and Methods** (cat. no. 6102.0.55.001); information about labour related surveys; and a help page for respondents to ABS labour related surveys. The Labour Theme Page can be accessed at <<https://www.abs.gov.au>> [Themes - People - Labour].

### TREND ESTIMATES

7 Series in this publication include **original** and **trend** series. Special care should be taken in interpreting data for the most recent months and quarters, as some of the original and all of the trend series are subject to revision.

8 It is not uncommon for movements in original time series data and those provided from trend series to differ. Movements in a time series of original data may reflect several factors, including:

- longer-term changes in the item being measured (i.e. trend movements)
- short-term irregular changes
- regular seasonal influences
- normal 'trading', 'working' or 'pay' day patterns
- systematic holiday effects.

9 Trend estimates help the user to identify the underlying magnitude and direction of a time series. Seasonal adjustment removes the effect of the last three listed influences from the data, leaving only trend and short-term irregular movements. Trend estimates are then obtained by removing the effects of the short-term irregularities, which in some series can be a major contributor to movements in the original data.

10 Trend estimates are produced by smoothing the seasonally adjusted series using a statistical procedure based on Henderson moving averages. At each time point in a series, a trend estimate is calculated using a centred x-term Henderson moving average of the seasonally adjusted series. The moving averages are centred on the point in time at which the trend is being estimated. The number of terms used to calculate the trend varies across surveys. Generally, ABS monthly surveys use a 13-term moving average and quarterly surveys use a 7-term moving average.

11 Estimates for the most recent time points cannot be calculated using the centred average method as there are insufficient data to do so. Instead, alternative approaches that approximate the smoothing properties of the Henderson moving average are used. This can lead to revision in the trend estimates for the most recent time periods until sufficient data are available to calculate the trend using the centred Henderson moving average. Revisions of trend estimates will also occur with revisions to the original data and re-estimation of seasonal adjustment factors.

12 Seasonal factors are reviewed at least annually for ABS labour series, to take account of additional original data. The results of the latest reviews were used to compile the trend estimates given in this publication. For further information about the most recent reviews of seasonal factors for the labour surveys, see the following publications:

- for labour force see **Labour Force, Australia** (cat. no. 6202.0)
- for labour price index see **Labour Price Index, Australia** (cat. no. 6345.0)
- for average weekly earnings see **Average Weekly Earnings, Australia** (cat. no. 6302.0)
- for public sector employees see **Wage and Salary Earners, Public Sector, Australia** (cat. no. 6248.0.55.001)
- for job vacancies see **Job Vacancies, Australia** (cat. no. 6354.0).

13 The general methods used in the ABS for estimating trends are described in **Information Paper: A Guide to Interpreting Time Series - Monitoring Trends** (cat. no. 1349.0).

## RELIABILITY OF ESTIMATES

14 Estimates in this publication are subject to two types of error:

- sampling error - errors that occur because the data were obtained from a sample rather than the entire population
- non-sampling error - errors that occur at any stage of a survey and can also occur in a census, e.g. incorrect responses to questions, processing errors, frame deficiencies.

15 For more information on these sources of error, and on measures of these types of errors, including standard errors, refer to the main publications associated with each of the data series presented in this publication (see the relevant sections later in these Explanatory Notes). More information on standard errors applying to LFS estimates is contained in **Information Paper: Labour Force Survey Standard Errors** (cat. no. 6298.0).

## ROUNDING

16 Estimates have been rounded and discrepancies may occur between sums of the component items and totals.

## LABOUR FORCE SURVEY DATA

### Description of the survey

17 Data in tables 1.1-1.7, 2.1-2.10, 3.1-3.3, 4.3 and 4.4 are obtained from the Labour Force Survey (LFS), which provides extensive information about the labour market on a monthly basis. The LFS is a component of the Monthly Population Survey (MPS), which includes the LFS and supplementary surveys.

### Monthly Population Survey

18 The MPS is a population survey based on a multi-stage area sample of private dwellings (currently about 30,000 houses, flats, etc.), and list samples of discrete Indigenous communities and non-private dwellings (hospitals, hotels, motels, etc.), and covers about 0.5% of the

population of Australia. The information is obtained from occupants of selected dwellings by interviewers, with the first interview conducted face-to-face and subsequent interviews over the telephone. Once selected, households are included for eight consecutive months before being replaced.

## **Labour Force Survey**

**19** The LFS has been conducted on a monthly basis since February 1978. Prior to that, from 1964 to 1978, a national survey was conducted quarterly. Telephone interviewing was introduced between August 1996 and February 1997. New questionnaires have been introduced periodically, most recently in April 2001.

**20** The LFS includes all usual residents of Australia aged 15 and over except:

- members of the permanent defence forces
- certain diplomatic personnel of overseas governments, customarily excluded from census and estimated population counts
- overseas residents in Australia
- members of non-Australian defence forces (and their dependants) stationed in Australia.

**21** From July 1993, Jervis Bay Territory has been excluded from the scope of the LFS.

## **Supplementary surveys**

**22** The supplementary surveys collect additional data on a different topic each month. Many topics covered are rotated on an annual or less frequent basis, while others are included once only. Results from each supplementary survey topic are released separately. A list of topics covered in recent years is in Appendix 3.

**23** Tables 4.1 and 4.2 contain data from the annual supplementary surveys Underemployed Workers and Persons Not in the Labour Force. These tables are updated annually.

**24** The supplementary surveys include a subset of the persons included in the LFS (see paragraph 20). The additional exclusions for most supplementary surveys are:

- persons living in private dwellings in remote and sparsely settled parts of Australia
- institutionalised persons
- boarding school pupils.

## **Reference period**

**25** Interviews are generally conducted during the two weeks beginning on the Monday between the 6th and 12th of each month, with questions relating to the week prior to the interview (the reference week).

## **Notes on data**

**26** From time to time, changes to survey methodology affect the time series produced. Some examples of changes to this survey are: new questions added to the LFS questionnaire in April 2001; and the introduction of telephone interviewing in 1996-97.

**27** In February 2004 the definition of unemployed persons was changed to include all persons who were waiting to start work and were available to start in the reference week, with consequent revisions to data from April 2001 to January 2004. For further details, see **Information Paper: Forthcoming Changes to Labour Force Statistics** (cat. no. 6292.0).

## **Population benchmarks**

**28** LFS estimates of persons employed, unemployed and not in the labour force are calculated in such a way as to add up to independently estimated counts (benchmarks) of the civilian population aged 15 years and over. These benchmarks are based on census data adjusted for under-enumeration and updated for births, deaths, interstate migration, and net permanent and long-term migration. This procedure compensates for under-enumeration in the survey, and leads to more reliable estimates.

**29** From February 2004, labour force estimates have been compiled using benchmarks based on the results of the 2001 Census of Population and Housing. Revisions were made to historical estimates from January 1999 to January 2004. These revisions affect original, seasonally adjusted and trend estimates. The next revision is scheduled for February 2009 to take account of the results from the 2006 census.

## **Families series**

**30** Family relationship is not determined for all households and persons in scope of the LFS. This is due to a number of factors related to the scope and coverage of the LFS, as well as difficulties in determining family structure and characteristics. The survey questions used to determine family relationships are restricted to persons enumerated as usual residents of private dwellings. That is, the following persons are excluded:

- all persons enumerated in non-private dwellings (including hotels, motels, hospitals and other institutions)
- persons enumerated as visitors to (rather than usual residents of) private dwellings.

**31** In addition, in those households where it is not possible to obtain information relating to all the usual residents, no family information is

recorded. Thus, persons living in households that include a member of the permanent defence forces, who is outside the scope of the LFS, are excluded from survey questions used to determine family relationships. This also applies to households that, at the time of the survey, had one or more of their usual residents away for more than six weeks, and households from which an incomplete or inadequate questionnaire was obtained for any usual resident in scope of the survey.

### Further information and data on the LFS

**32** LFS estimates are published monthly in **Labour Force, Australia** (cat. no. 6202.0). A series of time series spreadsheets are released at the same time as this publication under cat. no. 6202.0.55.001. More detailed estimates are released, in electronic format, one week later, under cat. no. 6291.0.55.001. All electronic data can be accessed via the ABS web site at <<https://www.abs.gov.au>>. Additional data are available on request.

**33** For further information about the range of LFS products and services, and the concepts and methodology used in the LFS, refer to **Information Paper: Changes to Labour Force Survey Products** (cat. no. 6297.0), **Labour Statistics: Concepts, Sources and Methods** (cat. no. 6102.0.55.001), or contact the Assistant Director, Labour Force Survey on Canberra 02 6252 6565.

### EMPLOYER SURVEY DATA

**34** Tables 2.11, 5.1-5.3, 6.1-6.2 and 7.1 of this publication contain data from ABS employer surveys.

#### Scope of employer surveys

**35** Except where otherwise noted, the sample for ABS labour employer surveys is selected from the ABS Business Register, which is primarily based on registrations to the Australian Taxation Office's (ATO) Pay As You Go Withholding scheme. The population is updated quarterly to take account of new businesses, business that have ceased employing, changes in employment levels, changes in industry, and other general business changes. Businesses excluded from the scope of the employer surveys are:

- those primarily engaged in Agriculture, forestry and fishing (except for the Survey of Employment and Earnings)
- private households employing staff
- overseas embassies, consulates, etc.
- those located outside Australia.

### JOB VACANCIES DATA

**36** Table 7.1 contains data from the Job Vacancies Survey (JVS).

#### Description of the survey

**37** The current Job Vacancies Survey has been conducted since November 1983 and is a quarterly sample survey of approximately 4,600 employers. The survey produces estimates of the number of job vacancies in Australia.

#### Reference date

**38** The reference date for the survey is the third Friday of the middle month of the quarter.

#### Notes on data

**39** Prior to the August quarter 1999, job vacancies statistics were collected as part of the Job Vacancies and Overtime Survey. The overtime component of the survey ceased following the May quarter 1999.

#### Further information

**40** For further information about the range of products and services relating to ABS job vacancies statistics, and the concepts and methodology used, refer to **Job Vacancies, Australia** (cat. no. 6354.0), **Labour Statistics: Concepts, Sources and Methods** (cat. no. 6102.0.55.001), the associated time series spreadsheets available from the ABS web site, or contact the Manager, Job Vacancies Survey on Perth (08) 9360 5304.

### PUBLIC SECTOR EMPLOYEES DATA

#### Description of the survey

**41** Data in table 2.11 are obtained from a quarterly survey of public sector businesses: the Survey of Employment and Earnings - Public Sector (SEE). This survey has been conducted on a quarterly basis since the September quarter 1983. The survey measures both the number of public sector wage and salary earners employed in the middle month of each quarter and their total quarterly earnings.

#### Reference period

**42** The reference period for employees is the last pay period ending on or before the third Friday of the middle month of the quarter. The reference period for gross earnings is all pay periods which end within the quarter.

## Notes on data

43 The private sector component of the Survey of Employment and Earnings was discontinued after the December quarter 2001.

## Further information

44 For further information about the range of products and services relating to public service employees, and the concepts and methodology used, refer to **Wage and Salary Earners, Public Sector, Australia** (cat. no. 6248.0.55.001), **Labour Statistics: Concepts, Sources and Methods** (cat. no. 6102.0.55.001), or contact the Manager, Survey of Employment and Earnings, Public Sector on Perth (08) 9360 3141.

## AVERAGE WEEKLY EARNINGS DATA

45 Table 5.2 contains data from the Survey of Average Weekly Earnings (AWE).

## Description of the survey

46 The Survey of Average Weekly Earnings has been conducted quarterly since August 1981. Approximately 4,700 businesses contribute to the survey each quarter. The purpose of the survey is to measure average gross weekly earnings per employee job in Australia.

47 Average weekly earnings statistics represent average gross (before tax) earnings of employees and do not relate to average award rates nor to the earnings of the 'average person'. Estimates of average weekly earnings are derived by dividing estimates of weekly total earnings by estimates of number of employees. Changes in the averages may be affected not only by changes in the level of earnings of employees but also by changes in the overall composition of the wage and salary earner segment of the labour force.

## Reference period

48 The reference period for the survey is the last pay period ending on or before the third Friday of the middle month of the quarter. For non-weekly payrolls, businesses are asked to provide one week's portion.

## Further information

49 For further information about the range of products and services relating to average weekly earnings refer to **Average Weekly Earnings, Australia** (cat. no. 6302.0), **Labour Statistics: Concepts, Sources and Methods** (cat. no. 6102.0.55.001), the associated time series spreadsheets available from the ABS web site, or contact the Manager, Survey of Average Weekly Earnings on Perth 08 9360 5304.

## WAGE PRICE INDEX DATA

50 Table 5.1 contains data from the **Labour Price Index, Australia** (cat. no. 6345.0) publication.

## Description of the survey

51 The Labour Price Index measure changes in the price of labour services resulting from market pressures, and is unaffected by changes in the quality or quantity of work performed. i.e. it is unaffected by changes in the composition of the labour force, hours worked, or changes in characteristics of employees (e.g. work performance). Information about the wage price indexes has been released for each quarter since September 1997. Approximately 20,000 matched jobs from 4,800 businesses are priced each quarter.

## Reference period

52 The reference period for the survey is the last pay period ending on or before the third Friday of the mid-month of the quarter.

## Further information

53 For further information about the range of products and services relating to the Wage Price Index, and the concepts and methodology used, refer to **Labour Price Index, Australia** (cat. no. 6345.0), **Labour Price Index, Statistics Concepts, Sources and Methods** (cat. no. 6351.0.55.001), the associated time series spreadsheets available from the ABS web site, or contact Tim Landrigan on Perth 08 9360 5151.

## INDUSTRIAL DISPUTES DATA

54 Tables 6.1 and 6.2 contain data from the Industrial Disputes collection.

## Description of the survey

55 The ABS has been collecting information about industrial disputes since 1913. The Industrial Disputes collection produces estimates of the number of industrial disputes (where ten or more working days are lost), employees involved, and working days lost.

56 The scope of the Industrial Disputes collection is restricted to employing businesses at which an industrial dispute has occurred. For this collection, industrial disputes are defined as work stoppages of ten working days or more. Ten working days are equivalent to the amount of

ordinary time worked by ten people in one day, regardless of the length of the stoppage, e.g. 3,000 workers on strike for two hours would be counted as 750 working days lost (assuming they work an eight-hour day).

**57** Effects on other establishments not directly involved in the dispute, such as stand-downs because of lack of materials, disruption of transport services, power cuts, etc. are not included in the scope of this collection.

#### Reference period

**58** The collection reference period is the calendar quarter.

#### Further information

**59** For further information about the range of products and services relating to ABS industrial disputes statistics, and the concepts and methodology used, refer to the electronic publication **Industrial Disputes, Australia** (cat. no. 6321.0.55.001) and the associated time series spreadsheets, available from the ABS web site, **Labour Statistics: Concepts, Sources and Methods** (cat. no. 6102.0.55.001), or contact the Manager, Industrial Disputes on Perth 08 9360 5159.

#### NATIONAL ACCOUNTS DATA

**60** Table 5.3 contains data from the Australian National Accounts.

**61** Estimates of compensation of employees are contained within the Income Accounts of the Australian National Accounts, which are published in **Australian System of National Accounts** (cat. no. 5204.0) and **Australian Economic Indicators** (cat. no. 1350.0). For further information on how estimates are obtained, see **Australian System of National Accounts: Concepts, Sources and Methods** (cat. no. 5216.0).

#### INTERNATIONAL DATA

**62** Table 1.8 contains data from the International Labour Organisation.

**63** Estimates of key indicators of the labour markets from various countries have been included for comparison with Australian estimates of labour force participation, employment, unemployment and unemployment rates.

## Glossary

### GLOSSARY

#### Active steps to find work

Includes writing, telephoning or applying in person to an employer for work; answering an advertisement for a job; checking factory noticeboards or the touchscreens at Centrelink offices; being registered with Centrelink as a jobseeker; checking or registering with any other employment agency; advertising or tendering for work; and contacting friends or relatives.

#### Actual hours worked

The hours actually worked during the reference week, not necessarily hours paid for.

#### Adult employees

Adult employees are those employees 21 years of age or over and those employees who, although under 21 years of age, are paid at the full adult rate for their occupation.

#### Aggregate (actual) hours worked

The total number of hours a group of employed persons has actually worked during the reference week, not necessarily hours paid for.

#### Attending full-time education

Persons aged 15-24 years who were enrolled full-time at secondary school, high school, Technical and Further Education (TAFE) college, university, or other educational institution in the reference week.

### Average compensation per employee

**National Accounts.** The total compensation of employees divided by the number of employees.

### Average earnings (National Accounts basis)

See **average compensation per employee**.

### Average hours worked

Aggregate hours worked by a group divided by the number of persons in that group.

### Average weekly earnings

Average weekly earnings represent average gross (before tax) earnings of employees and do not relate to average award rates nor to the earnings of the 'average person'. Estimates of average weekly earnings are derived by dividing estimates of weekly total earnings by estimates of number of employees. For information about scope exclusions applying to employer surveys, refer to paragraph 35 of the Explanatory Notes.

### Civilian population aged 15 years and over

All usual residents of Australia aged 15 years and over except members of the permanent defence forces, certain diplomatic personnel of overseas governments customarily excluded from census and estimated population counts, overseas residents in Australia, and members of non-Australian defence forces (and their dependants) stationed in Australia.

### Commonwealth government employees

Employees of all departments, agencies and authorities created by or reporting to the Commonwealth Parliament. Those bodies run jointly by the Commonwealth Government and state governments are classified to Commonwealth.

### Compensation of employees

**National Accounts.** The total remuneration, in cash or in kind, payable by enterprises to employees in return for work done by the employees during the accounting period. Compensation of employees comprises wages and salaries (in cash and in kind) and **employers' social contributions**. Compensation of employees is not payable in respect of unpaid work undertaken voluntarily, including the work done by members of a household within an unincorporated enterprise owned by the same household. Compensation of employees excludes any taxes payable by the employer on the wage and salary bill (e.g. payroll tax, fringe benefits tax). See **Australian System of National Accounts: Concepts, Sources and Methods** (cat. no. 5216.0) for further information.

### Contributing family worker

A person who works without pay, in an economic enterprise operated by a relative.

### Country of birth

Classified according to the **Standard Australian Classification of Countries (SACC)** (cat. no. 1269.0).

### Couple families

A family based on two persons who are in a registered or de facto marriage and who are usually resident in the same household.

### Dependants

All family members under 15 years, and all children aged 15-24 years attending full-time education (except those who have a partner or child of their own usually resident in the household).

### Dependent child

Any child in a family under 15 years of age or aged 15-24 years who is attending full-time education (except those who have a partner or child of their own usually resident in the household).

### Dependent student



A child who is 15-24 years of age, who is attending full-time education, and who has no partner or child of his or her own usually resident in the same household.

### **Discouraged jobseekers**

Persons with marginal attachment to the labour force who wanted to work and were available to start work within the next four weeks but whose main reason for not actively looking for work was that they believed they would not find a job for any of the following reasons:

- considered to be too young/too old by employers
- lacked necessary schooling, training, skills or experience
- difficulties because of language or ethnic background
- no jobs in their locality or line of work
- no jobs available at all.

### **Duration of unemployment**

Under the redesigned LFS questionnaire, implemented in April 2001, the definition of duration of unemployment is the period of time from when an unemployed person began looking for work, until the end of the reference week; or the period of time since an unemployed person last worked in any job for two weeks or more, until the end of the reference week; whichever was the shorter period.

Prior to April 2001, duration of unemployment was defined in the LFS as the period of time from when an unemployed person began looking for work, until the end of the reference week; or the period of time since an unemployed person last worked full-time for two weeks or more, until the end of the reference week; whichever was the shorter period.

### **Employed**

Employed persons include all persons aged 15 years and over who, during the reference week:

- worked for one hour or more for pay, profit, commission or payment in kind in a job or business, or on a farm (comprising employees, employers and own account workers); or
- worked for one hour or more without pay in a family business or on a farm (i.e. contributing family workers); or
- were employees who had a job but were not at work and were:
  - away from work for less than four weeks up to the end of the reference week; or
  - away from work for more than four weeks up to the end of the reference week and received pay for some or all of the four week period to the end of the reference week; or
  - away from work as a standard work or shift arrangement; or
  - on strike or locked out; or
  - on workers' compensation and expected to return to their job; or
- were employers or own account workers, who had a job, business or farm, but were not at work.

### **Employed full-time**

See **full-time employed**.

### **Employed part-time**

See **part-time employed**.

### **Employee**

**Labour Force Survey and other household surveys.** A person who works for a public or private employer and receives remuneration in wages, salary, a retainer fee from their employer while working on a commission basis, tips, piece rates, or payment in kind, or a person who operates their own incorporated enterprise with or without hiring employees.

**Employer surveys.** Employees are wage and salary earners who received pay for any part of the reference period. For information about scope exclusions applying to employer surveys, refer to paragraph 35 of the Explanatory Notes.

### **Employee job**

**Wage Price Index.** A job for which the occupant receives remuneration in wages, salary, payment in kind, or piece rates. All employee jobs in all employing organisations (except those excluded from all ABS labour employer surveys) are in scope of the WPI, except the following:

- 'non-maintainable' jobs (i.e. jobs that are expected to be occupied for less than six months of a year)
- jobs for which wages and salaries are not determined by the Australian labour market (e.g. working proprietors of small incorporated enterprises, most employees of Community Development Employment Programs, jobs where the remuneration is set in a foreign country).

For information about scope exclusions applying to employer surveys, refer to paragraph 35 of the Explanatory Notes.

## **Employer**

**Labour Force Survey and other household surveys.** A person who operates their own unincorporated economic enterprise or engages independently in a profession or trade, and hires one or more employees.

**Employer surveys.** A business with one or more employees.

## **Employers' social contributions**

**National Accounts.** Contributions by employers to pension and superannuation funds; and premiums paid by employers to workers' compensation schemes for occupational injuries and diseases.

## **Extended labour force underutilisation rate**

The unemployed, plus the underemployed, plus two groups of marginally attached to the labour force:

- (i) persons actively looking for work, not available to start work in the reference week, but available to start work within four weeks and
- (ii) discouraged jobseekers

as a percentage of the labour force augmented by (i) and (ii).

## **Family**

Two or more persons, one of whom is at least 15 years of age, who are related by blood, marriage (registered or de facto), adoption, step or fostering; and who are usually resident in the same household. The basis of a family is formed by identifying the presence of a couple relationship, lone parent-child relationship or other blood relationship. Some households will, therefore, contain more than one family.

## **Family reference person**

In families which are not couple families or one-parent families, as defined, the family reference person is the eldest person in the household.

## **Former workers**

Unemployed persons who have previously worked for two weeks or more but not in the last two years.

## **Full-time educational attendance**

Persons aged 15-19 who, during the reference week were enrolled full-time at secondary or high schools, and those aged 15-24 who, during the reference week, were enrolled full-time at a Technical and Further Education (TAFE) college, university, or other tertiary educational institution.

## **Full-time employed**

**Household surveys.** Persons employed full-time are those employed persons who usually worked 35 hours or more a week (in all jobs) and those who, although usually working less than 35 hours a week, worked 35 hours or more during the reference week.

## **Full-time employees**

**Employer surveys.** Full-time employees are permanent, fixed term and casual employees who normally work the agreed or award hours for a full-time employee in their occupation and received pay for any part of the reference period. If agreed or award hours do not apply, employees are regarded as full-time if they ordinarily work 35 hours or more per week.

## **Gross domestic product (GDP)**

**National Accounts.** The total market value of goods and services produced in Australia within a given period after deducting the cost of goods and services used up in the process of production but before deducting allowances for the consumption of fixed capital. Thus gross domestic product, as here defined, is at 'market prices'. It is equivalent to gross national expenditure plus exports of goods and services less imports of goods and services. See **Australian System of National Accounts: Concepts, Sources and Methods** (cat. no. 5216.0) for further information.

## **Gross mixed income (GMI)**

**National Accounts.** The owners of unincorporated enterprises, or other members of their households, may work without receiving any wage or salary. Mixed income includes both **gross operating surplus** for the unincorporated enterprises and returns for the proprietors' own labour (akin to wages and salaries). See **Australian System of National Accounts: Concepts, Sources and Methods** (cat. no. 5216.0) for further information.

### Gross operating surplus (GOS)

**National Accounts.** The amount of gross output remaining after subtracting costs incurred in producing that output, but before any deductions for consumption of fixed capital. See **Australian System of National Accounts: Concepts, Sources and Methods** (cat. no. 5216.0) for further information.

### Household

A group of one or more persons in a private dwelling who consider themselves to be separate from other persons (if any) in the dwelling, and who make regular provision to take meals separately from other persons, i.e. at different times or in different rooms. Lodgers who receive accommodation but no meals are treated as separate households. Boarders who receive both accommodation and meals are not treated as separate households. A household may consist of any number of families and non-family members.

### Industrial dispute

An industrial dispute is defined as a state of disagreement over an issue or group of issues between an employer and its employees, which results in employees ceasing work. Industrial disputes comprise strikes, which are a withdrawal from work by a group of employees; and lockouts, which are a refusal by an employer or group of employers to permit some or all of their employees to work.

### Industry

An industry is a group of businesses or organisations that perform similar sets of activities in terms of the production of goods and services. Industry is classified according to the **Australian and New Zealand Standard Industrial Classification (ANZSIC), 1993** (cat. no. 1292.0). The industry assigned to an employed person is the industry of the organisation in which the person's main job is located. Unemployed persons who had worked for two weeks or more in the last two years are classified according to the industry of their most recent job.

### Job leavers

Unemployed persons who have worked for two weeks or more in the past two years and **left that job voluntarily** - that is, because (for example): of unsatisfactory work arrangements/pay/hours; the job was a holiday job or they left the job to return to studies; or their last job was running their own business and they closed down or sold that business for reasons other than financial difficulties.

### Job losers

Unemployed persons who have worked for two weeks or more in the past two years and **left that job involuntarily**: that is, they were laid off or retrenched from that job; left that job because of their own ill-health or injury; the job was seasonal or temporary; or their last job was running their own business and the business closed down because of financial difficulties.

### Job vacancy

A job vacancy is an employee job available for immediate filling on the survey reference date and for which recruitment action has been taken. Recruitment action includes efforts to fill vacancies by advertising, by factory notices, by notifying public or private employment agencies or trade unions and by contacting, interviewing or selecting applicants already registered with the enterprise or organisation. Excluded are vacancies:

- for jobs which became vacant on the survey date and were filled that same day
- for jobs of less than one day's duration
- to be filled by persons already hired, or by promotion or transfer of existing employees
- to be filled by employees returning from paid or unpaid leave or after industrial dispute(s)
- not available for immediate filling on the survey reference date
- for work to be carried out by contractors
- for which no recruitment action has been taken
- where a person has been appointed but has not yet commenced duty
- to be filled by staff from contract labour agencies
- for jobs available only to persons already employed by the enterprise or organisation.

For information about scope exclusions applying to employer surveys, refer to paragraph 35 of the Explanatory Notes.

### Labour force

The labour force is the labour supply available for the production of economic goods and services in a given period, and is the most widely used measure of the economically active population. Persons in the labour force are classified as either employed or unemployed according

to their activities during the reference period by using a specific set of priority rules.

### **Labour force status**

A classification of the civilian population aged 15 years and over into employed, unemployed or not in the labour force, as defined. The definitions conform closely to the international standard definitions adopted by the International Conferences of Labour Statisticians.

### **Labour force underutilisation rate**

The unemployed plus the underemployed, as a percentage of the labour force.

### **Local government employees**

Employees of municipalities and shires and other local authorities created by or subject to the provisions of local government legislation, such as county councils in New South Wales.

### **Lone parent**

A person who has no spouse or partner present in the household but who forms a parent-child relationship with at least one dependent or non-dependent child usually resident in the household.

### **Lone person**

A person who makes provision for their food and other essentials for living, without combining with any other person to form part of a multi-person household. They may live in a dwelling on their own or share a dwelling with another individual or family.

### **Long-term unemployed**

Persons unemployed for 12 months or more. See **duration of unemployment** for details of the calculation of duration of unemployment.

### **Long-term unemployment rate**

The number of long-term unemployed persons expressed as a percentage of the labour force.

### **Marginal attachment to the labour force**

Persons who were not in the labour force in the reference week, wanted to work, and:

- were actively looking for work but did not meet the availability criteria to be classified as unemployed or
- were not actively looking for work but were available to start work within four weeks or could start work within four weeks if child care was available.

The criteria for determining those in the labour force are based on activity (i.e. working or looking for work) and availability to start work during the reference week. The criteria associated with marginal attachment to the labour force, in particular the concepts of wanting to work and reasons for not actively looking for work, are more subjective. Hence, the measurement against these criteria is affected by the respondent's own interpretation of the concepts used. An individual respondent's interpretation may be affected by their work aspirations, as well as family, economic and other commitments.

### **Marital status**

See **social marital status**.

### **Mean age**

The sum of the ages of all the persons in a group, divided by the total number of persons in that group.

### **Mean duration of unemployment**

The sum of the duration of unemployment of all the unemployed persons in a group, divided by the total number of unemployed persons in that group.

### **Median age**

The age which divides a group of persons into two equal groups: one comprising persons whose age is above the median; and the other, persons whose age is below it.

### **Median duration of unemployment**

The duration which divides unemployed persons into two equal groups: one comprising persons whose duration of unemployment is above the median; and the other, persons whose duration is below it.

### **Non-dependent child**

A child of a couple or lone parent usually resident in the household, aged over 15 years and who is not a dependent student aged 15-24 years, and who has no partner or child of their own usually resident in the household.

### **Non-family member**

A person who is not related to any other member of the household in which they are living.

### **Not in the labour force**

Persons who were not classified as employed or unemployed.

### **Occupation**

An occupation is a collection of jobs that are sufficiently similar in their main tasks to be grouped together for the purposes of classification. Occupation is classified according to the **ASCO Australian Standard Classification of Occupations, Second Edition** (cat. no. 1220.0). The occupation assigned to an employed person relates to the person's main job. Unemployed persons who had worked for two weeks or more in the last two years are classified according to the occupation of their most recent job.

### **One-parent family**

A family consisting of a lone parent with at least one dependent or non-dependent child (regardless of age) who is also usually resident in the household.

### **Ordinary time earnings**

See **weekly ordinary time earnings**.

### **Original series**

Estimates produced directly from the survey data, before seasonal adjustment or trend estimation takes place.

### **Other family**

Related individuals residing in the same household who do not form a couple or parent-child relationship with any other person in the household and are not attached to a couple or one parent family in the household. If two brothers, for example, are living together and neither is a spouse, a lone parent or a child, then they are classified as other family.

### **Overtime earnings**

See **weekly overtime earnings**.

### **Own-account worker**

A person who operates his or her own unincorporated economic enterprise or engages independently in a profession or trade, and hires no employees.

### **Participation rate**

The labour force participation rate for any group within the population is the labour force component of that group, expressed as a percentage of the population in that group.

## **Part-time employed**

**Household surveys.** Persons employed part-time are those employed persons who usually worked less than 35 hours a week (in all jobs) and either did so during the reference week, or were not at work in the reference week.

## **Reason for leaving last job**

Unemployed persons who had worked for two weeks or more in the past two years classified by whether they left that job voluntarily, that is, job leavers; or left that job involuntarily, that is, job losers.

## **Seasonally adjusted series**

A time series of estimates with the estimated effects of normal seasonal variation removed. See paragraphs 7-13 of the Explanatory Notes for more detail.

## **Social marital status**

Social marital status is the relationship status of an individual with reference to another person who is usually resident in the household. A marriage exists when two people live together as husband and wife, or partners, regardless of whether the marriage is formalised through registration. Individuals are, therefore, regarded as married if they are in a de facto marriage, or if they are living with the person to whom they are registered as married.

## **State capital cities**

The areas determining the six state capital cities are the Statistical Divisions for those capital cities defined in the **Statistical Geography: Volume 1 - Australian Standard Geographical Classification (ASGC)** (cat. no. 1216.0).

## **State government employees**

Employees of all State government departments and authorities created by, or reporting to, State Parliaments, including organisations for which the Commonwealth has assumed financial responsibility. Following self-government, the Northern Territory and the Australian Capital Territory administrations have been classified to State Governments. Employees of State Governments employed interstate are included in the estimates of the State in which they are based.

## **Status in employment**

Employed persons classified by whether they were employees, employers, own account workers or contributing family workers.

## **Total earnings**

See **weekly total earnings**.

## **Total hourly rates of pay index excluding bonuses**

**Wage Price Index.** This index measures quarterly change in a weighted combination of ordinary time and overtime hourly rates of pay. See **Labour Price Index, Australia** (cat. no. 6345.0) for more information.

## **Trend series**

A smoothed seasonally adjusted series of estimates. See paragraphs 7-13 of the Explanatory Notes for more detail.

## **Underemployed workers**

Underemployed workers are employed persons who want, and are available for, more hours of work than they currently have. They comprise:

- persons employed part-time who want to work more hours and are available to start work with more hours, either in the reference week or in the four weeks subsequent to the survey
- persons employed full-time who worked part-time hours in the reference week for economic reasons (such as being stood down or insufficient work being available). It is assumed that these people wanted to work full-time in the reference week and would have been available to do so.

## **Underemployment rate**

The number of underemployed workers expressed as a percentage of the labour force.

### **Unemployed**

Persons aged 15 years and over who were not employed during the reference week, and

- had actively looked for full-time or part-time work at any time in the four weeks up to the end of the reference week and were available for work in the reference week, or
- were waiting to start a new job within four weeks from the end of the reference week and could have started in the reference week if the job had been available then.

### **Unemployed looking for first full-time job**

Unemployed persons looking for full-time work who had never worked full-time for two weeks or more.

### **Unemployed looking for first job**

Unemployed persons who had never worked for two weeks or more.

### **Unemployed looking for full-time work**

Unemployed persons who:

- actively looked for full-time work, or
- were waiting to start a new full-time job.

### **Unemployed looking for part-time work**

Unemployed persons who:

- actively looked for part-time work only, or
- were waiting to start a new part-time job.

### **Unemployment rate**

The number of unemployed persons expressed as a percentage of the labour force.

### **Unemployment to population ratio**

For any group, the number of unemployed persons expressed as a percentage of the civilian population aged 15 and over in the same group.

### **Usual hours worked**

The hours usually worked per week by an employed person.

### **Wage and salary earners**

See **employee**.

### **Weekly ordinary time earnings**

Weekly ordinary time earnings refers to one week's earnings of employees for the reference period attributable to award, standard or agreed hours of work, calculated before taxation and any other deductions (e.g. superannuation, board and lodging) have been made. Included are piecework payments and one week's portion of regular production and task bonuses and commissions. Excluded are overtime payments and payments not related to the reference period, e.g. bonus payments for earlier periods of work.

### **Weekly overtime earnings**

Weekly overtime earnings refers to payment for hours worked in the reference week in excess of award, standard or agreed hours of work, calculated before taxation and any other deductions (e.g. superannuation) have been made.

### **Weekly total earnings**

Weekly total earnings of employees is equal to weekly ordinary time earnings plus weekly overtime earnings.

### Working days lost

Refers to working days lost by employees directly and indirectly involved in the dispute.

### Working days lost per thousand employees

Calculated for a quarterly period by dividing the total number of working days lost in the period by the total number of employees in the Australian labour force in the period (obtained from the ABS Labour Force Survey) and multiplying by 1,000.

## Abbreviations

The following abbreviations have been used in this publication

ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
ASCO	Australian Standard Classification of Occupations
ASGC	Australian Standard Geographical Classification
ATO	Australian Taxation Office
AWE	average weekly earnings
EEH	Survey of Employee Earnings and Hours
GDP	gross domestic product
ID	industrial disputes
ILO	International Labour Organisation
LFS	Labour Force Survey
LPI	labour price index
MPS	Monthly Population Survey
qtr	quarter
RSE	relative standard error
SACC	Standard Australian Classification of Countries
SEE	Survey of Employment and Earnings

## Data Sources for Tables (Appendix)

### APPENDIX 1 DATA SOURCES FOR TABLES

#### HOW TO FIND DATA SOURCES

To find a publication on the ABS web site, go to <<https://www.abs.gov.au>> [AusStats - Publications and Data - Publications]. Publications can be accessed by catalogue number and subject e.g. to find the publication **Labour Force, Australia** (cat. no. 6202.0), look under '62. Labour force'. Catalogue numbers are listed under the relevant subject listing.

Similarly, to find spreadsheets and data cubes, go to <<https://www.abs.gov.au>> [AusStats - Publications and Data], then [Data Cubes] or [Time Series Spreadsheets]. Individual numbered spreadsheets and data cubes are listed under the catalogue number. Monthly, quarterly and annual products are listed separately.

No. Table description	Data source	Notes
1.1 Trend	Labour Force, Australia (cat. no. 6202.0) 6202.0.55.001 spreadsheet table 1	
1.2 Age by marital status	6291.0.55.001 spreadsheet table 1	
1.3 States and territories	Labour Force, Australia (cat. no. 6202.0) 6291.0.55.001 spreadsheet table 2	Excludes Capital city/balance of state
1.4 Educational attendance	6291.0.55.001 spreadsheet table 3	
1.5 Country of birth	6291.0.55.001 data cube LM4	More detailed Age Includes Sex, State, Less detailed Country of birth
	6291.0.55.001 data cube LM5	Includes Sex, Age, State, Less detailed Country of birth
	6291.0.55.001 data cube LM6	Includes Sex, State
	6291.0.55.001 data cube LM7	Includes Sex, State, Less detailed Country of birth
Year of arrival	6291.0.55.001 data cube LM4	Includes Sex, State, Less detailed Country of birth
	6291.0.55.001 data cube LM7	Includes Sex, State, Less detailed Country of birth
1.6 Relationship in household	6291.0.55.001 data cube FM1	Includes State
	6291.0.55.001 data cube FM2	Includes Age
	6291.0.55.001 data cube FM3	Includes Hours worked
	6291.0.55.001 data cube FM4	Unemployed persons only, Includes Duration of unemployment



1.7 Families	6291.0.55.001 data cube FA2	June data only
1.8 International comparisons	International Labour Organisation, Year Book of Labour Statistics 1998, 2000, 2001 and 2002 International Labour Organisation, Key Indicators of the Labour Market 2001-02 International Labour Organisation, LABORSTA database: <a href="http://laborsta.ilo.org">http://laborsta.ilo.org</a>	
2.1 Industry: trend	6291.0.55.001 spreadsheet table 4	Includes Employed full-time, Employed part-time
2.2 Industry: divisions and subdivisions	6291.0.55.001 spreadsheet table 6 6291.0.55.001 data cube E03 6291.0.55.001 data cube E05 6291.0.55.001 data cube E06	Includes Sex, State, Hours worked, Less detailed Industry Includes Sex, Age, Status in employment, Hours worked Includes Sex, State, Status in employment, Hours worked, More detailed Industry
2.3 Occupation	6291.0.55.001 spreadsheet table 7 6291.0.55.001 spreadsheet table 12 6291.0.55.001 data cube E07 6291.0.55.001 data cube E08	Less detailed Occupation Includes Hours worked, Less detailed Occupation Includes Age, Hours worked, Status in employment Includes State, Status in employment, More detailed Occupation
2.4 Industry and Occupation by full-time part-time status	6291.0.55.001 data cube E09	Includes State, Hours worked
2.5 Industry by status in employment	6291.0.55.001 data cube E04 6291.0.55.001 data cube E05 6291.0.55.001 data cube E06	Includes Sex, State, Excludes Industry Includes Sex, Age, More detailed Industry Includes Sex, State, More detailed Industry
Occupation by status in employment	6291.0.55.001 data cube E04 6291.0.55.001 data cube E07 6291.0.55.001 data cube E08	Includes Sex, State, Excludes Occupation Includes Sex, Age, More detailed Occupation Includes Sex, State, More detailed Occupation
Hours worked in all jobs by status in employment	6291.0.55.001 spreadsheet table 8 6291.0.55.001 spreadsheet table 13 6291.0.55.001 data cube E04 6291.0.55.001 data cube E05 6291.0.55.001 data cube E06 6291.0.55.001 data cube E07 6291.0.55.001 data cube E08	Excludes Hours worked, Includes Sex, Employed full-time, Employed part-time Includes Sex Includes Sex, State Includes Sex, Age, Industry Includes Sex, State, Industry Includes Sex, Age, Occupation Includes Sex, State, Occupation
2.6 Average hours worked in all jobs by Industry	6291.0.55.001 spreadsheet table 11 6291.0.55.001 data cube E03 6291.0.55.001 data cube E05 6291.0.55.001 data cube E06 6291.0.55.001 data cube E09	Includes State Includes Age, Status in employment, More detailed Industry Includes State, Status in employment, More detailed Industry Includes State, Occupation
Average hours worked in all jobs by Occupation	6291.0.55.001 spreadsheet table 12 6291.0.55.001 data cube E07 6291.0.55.001 data cube E08 6291.0.55.001 data cube E09	Includes Age, Status in employment, More detailed Occupation Includes State, Status in employment, More detailed Occupation Includes State, Industry
2.7 Actual hours worked in all jobs	6291.0.55.001 spreadsheet table 9 6291.0.55.001 spreadsheet table 11 6291.0.55.001 spreadsheet table 12 6291.0.55.001 spreadsheet table 13 6291.0.55.001 data cube EM1 6291.0.55.001 data cube E03 6291.0.55.001 data cube E04	Includes Industry Includes Occupation Includes Status in employment Includes Age, State Includes State, Industry Includes State, Status in employment
2.8 Actual hours worked in all jobs	6291.0.55.001 spreadsheet table 9 6291.0.55.001 spreadsheet table 11 6291.0.55.001 spreadsheet table 12 6291.0.55.001 spreadsheet table 13 6291.0.55.001 data cube EM1 6291.0.55.001 data cube E03 6291.0.55.001 data cube E04	Includes Industry Includes Occupation Includes Status in employment Includes Age, State Includes State, Industry Includes State, Status in employment
Usual hours worked in all jobs	6291.0.55.001 spreadsheet table 10 6291.0.55.001 data cube EM3 6291.0.55.001 data cube E10	Includes Age, State Includes State, Industry
2.9 Full-time workers who worked less than 35 hours in all jobs	6291.0.55.001 data cube EM2	Includes Age, State, Hours worked
2.10 Future employment expectations by job tenure	6291.0.55.001 data cube E02	Excludes Future employment expectations, Includes State, Age
2.11 Public sector employees	Wage and Salary Earners, Public Sector, Australia (cat. no. 6248.0.55.001)	
Public sector employees: Australia Totals	6248.0.55.001 spreadsheet table 1	Includes State
Public sector employees by Level of government: Trend	6248.0.55.001 spreadsheet table 2	Includes Commonwealth government, State, Seasonally adjusted and Original data

	6248.0.55.001 spreadsheet table 3	Includes State government, State, Seasonally adjusted and Original data
	6248.0.55.001 spreadsheet table 4	Includes Local government, State, Seasonally adjusted and Original data
Public sector employees by State: Trend	6248.0.55.001 spreadsheet table 1	Includes Seasonally adjusted and Original data
	6248.0.55.001 spreadsheet table 2	Includes Commonwealth government, Seasonally adjusted and Original data
	6248.0.55.001 spreadsheet table 3	Includes State government, Seasonally adjusted and Original data
	6248.0.55.001 spreadsheet table 4	Includes Local government, Seasonally adjusted and Original data
	6248.0.55.001 spreadsheet table 7a	Includes Industry
Public sector employees by Industry: Original	6248.0.55.001 spreadsheet table 7a	Includes State
3.1 Unemployed persons: Duration of unemployment by Age	6291.0.55.001 data cube UM2	Excludes Age, Median Duration of unemployment
	6291.0.55.001 data cube UM3	Excludes Median Duration of unemployment
3.2 Long-term unemployed	6291.0.55.001 spreadsheet table 15	
	6291.0.55.001 data cube UM2	Excludes Trend data, Includes State, More detailed Duration of unemployment
	6291.0.55.001 data cube UM3	Excludes Trend data, Includes State, Age
3.3 Unemployed persons: Reason for unemployment by Industry of last job	6291.0.55.001 data cube UQ1	Excludes Industry of last job
	6291.0.55.001 data cube UQ2	Excludes Reason for unemployment
Unemployed persons: Reason for unemployment by Occupation of last job	6291.0.55.001 data cube UQ1	Excludes Occupation of last job
	6291.0.55.001 data cube UQ3	Excludes Reason for unemployment
4.1 Underutilised labour	6105.0 spreadsheet table 1	
4.2 Underutilised labour	6105.0 spreadsheet table 1	
4.3 Underutilised labour	6105.0 spreadsheet table 1	
4.4 Part-time workers	6291.0.55.001 data cube E01	Less detailed Hours worked
4.5 Persons not in the labour force	6291.0.55.001 data cube NM1	
5.1 Wage cost index	Wage Cost Index, Australia (cat. no. 6345.0)	
Wage cost index: Trend data	6345.0 spreadsheet table 1B	
Wage cost index: Australia, States and territories	6345.0 spreadsheet table 2B	
Wage cost index: Private sector	6345.0 spreadsheet table 3B	Includes States and territories
Wage cost index: Public sector	6345.0 spreadsheet table 4B	Includes States and territories
Wage cost index: Industry	6345.0 spreadsheet table 5B	Includes Sector
Wage cost index: Occupation	6345.0 spreadsheet table 7B	Includes Sector
5.2 Average weekly earnings	Average Weekly Earnings, Australia (cat. no. 6302.0)	
Average weekly earnings by Sex	6302.0 spreadsheet table 1	Includes Full-time adult total earnings
Average weekly earnings: Private sector	6302.0 spreadsheet table 4	Includes Full-time adult total earnings
Average weekly earnings: Public sector	6302.0 spreadsheet table 7	Includes Full-time adult total earnings
5.3 Compensation of employees	Australian National Accounts: National Income, Expenditure and Product (cat. no. 5206.0)	
	Industrial Disputes, Australia (cat. no. 6321.0.55.001)	
6.1 Industrial disputes: Working days lost		
Industrial disputes: Working days lost by State	6321.0.55.001 spreadsheet table 3a	
Industrial disputes: Working days lost by Industry	6321.0.55.001 spreadsheet table 2a	
6.2 Industrial disputes: Working days lost per 1,000 employees	Industrial Disputes, Australia (cat. no. 6321.0.55.001)	
Industrial disputes: Working days lost per 1,000 employees by State	6321.0.55.001 spreadsheet table 3b	
Industrial disputes: Working days lost per 1,000 employees by Industry	6321.0.55.001 spreadsheet table 2b	
7.1 Job vacancies	Job Vacancies, Australia (cat. no. 6354.0)	
Job vacancies: Australia, States and Territories	6354.0 spreadsheet table 1C	

## List of Articles (Appendix)

### APPENDIX 2 LIST OF ARTICLES

April 2005

People who work few hours

Health, disability, age and labour force participation

Spotlight: Methods of setting pay

**Spotlight: Annual measures of labour underutilisation**

**January 2005**

**Labour force participation in Australia**

**Experimental estimates of the average age at withdrawal from the labour force**

**Spotlight: Employment in information and communication technology (ICT)**

**Spotlight: Labour Price Index**

**Technical report: Implementation of computer assisted interviewing in the Labour Force Survey**

**October 2004**

**Changes in types of employment**

**Mature age people and the labour force**

**July 2004**

**Children living without an employed parent**

**Labour underutilisation**

**Spotlight: Industrial disputes**

**Technical report: Labour Force Survey regions**

**April 2004**

**Job search experience: methods and barriers in finding jobs**

**Trade union membership**

**Spotlight: Occupation**

**Technical report: Improvements to labour force estimates**

**January 2004**

**Employment in information and communication technology**

**Labour force participation: international comparison**

**Technical report: Changes to Labour Force Survey seasonal adjustment processes**

**October 2003**

**Labour market transitions of teenagers**

**Spotlight: Country of birth**

**Spotlight: Multiple job holders**

**Technical report: New Labour Force Survey sample selections: analysis of the effect on estimates**

**July 2003**

**Experimental volume measures of labour underutilisation**

**Unemployment and participation rates in Australia: a cohort analysis**

**Spotlight: Population, participation and productivity: contributions to Australia's economic growth**

**Technical report: Measures of weekly hours worked**

**April 2003**

**Do job vacancies provide a leading indicator of employment growth?**

**Characteristics of underemployed workers**

**Spotlight: Parental leave**

**Spotlight: Methods of setting pay**

**Technical report: Labour Force Survey sample redesign**

Note: the following articles appeared in **Labour Force, Australia** (cat. no. 6203.0).

**December 2002**

**Volatility of labour force estimates**

**October 2002**

**Measures of labour underutilisation**

**February 2002**

**Seasonal reanalysis of monthly labour force estimates**

**October 2001**

**Full-time and part-time employment**

**August 2001**

**Experimental estimates: labour force characteristics of Indigenous Australians**

**June 2001**

**Duration of unemployment: recent definitional changes**

**February 2001**

**Unemployment and supplementary measures of underutilised labour**

**May 2000**

Status in employment data changes: correction

**April 2000**

**Using the unemployment rate series to illustrate the seasonal adjustment process**

December 1999

Why are there differences between two seasonally adjusted measures of Australian total employment?

November 1999

Industry, occupation and status in employment data

## Related Publications (Appendix)

### APPENDIX 3 RELATED PUBLICATIONS

Title	cat. no.	Frequency	Latest issue
Information papers and other reference material			
ABS Labour Market Statistics	6106.0.55.001	Irregular	2003
Australian System of National Accounts: Concepts, Sources & Methods	5216.0	Irregular	2000
Changes to Labour Force Survey Products	6297.0	Irregular	2003
Forthcoming Changes to Labour Force Statistics	6292.0	Irregular	2003
Labour Force Survey Sample Design	6269.0	Irregular	2002
Labour Force Survey Standard Errors	6298.0	Irregular	2003
Labour Price Index: Statistics Concepts, Sources & Methods	6351.0.55.001	Irregular	2004
Labour Statistics: Concepts, Sources & Methods	6102.0.55.001	Irregular	ABS web site
Questionnaires Used in the Labour Force Survey	6232.0	Irregular	2004
Australians' Employment and Unemployment Patterns: Expanded Confidentialised Unit Record File, Technical Paper	6286.0.55.002	Irregular	1994 to 1997
Employment Arrangements and Superannuation, Australia: Confidentialised Unit Record File, Technical Paper	6361.0.55.002	Irregular	Apr to Jun 2000
Labour force supplementary surveys			
Career Experience	6254.0	Irregular	Nov 2002
Child Care	4402.0	Irregular	Jun 2002
Education & Work	6227.0	Annual	May 2004
Employee Earnings, Benefits & Trade Union Membership	6310.0	Annual	Aug 2004
Forms of Employment	6359.0	Irregular	Nov 2004
Job Search Experience	6222.0	Annual	Jul 2004
Labour Force Experience	6206.0	Biennial	Feb 2003
Labour Force Status & Other Characteristics of Families(a)	6224.0	Discontinued	Final issue 2000
Labour Force Status & Other Characteristics of Migrants	6250.0	Irregular	Nov 2004
Labour Mobility	6209.0	Biennial	Feb 2004
Locations of Work	6275.0	Irregular	Jun 2000
Multiple Jobholding(b)	6216.0	Discontinued	Final issue 2000
Persons Not in the Labour Force	6220.0	Annual	Sep 2004
Retirement & Retirement Intentions	6238.0	Irregular	Nov 1997
Retrenchment & Redundancy(c)	6266.0	Discontinued	Final issue 2001
Underemployed Workers	6265.0	Annual	Sep 2004
Work-Related Injuries	6324.0	Irregular	Sep 2000
Working Arrangements	6342.0	Irregular	Nov 2003
Sub-annual labour surveys			
Average Weekly Earnings	6302.0	Quarterly	Feb 2005
Industrial Disputes	6321.0.55.001	Quarterly	Mar qtr 2005
Job Vacancies	6354.0	Quarterly	Feb 2005
Labour Force	6202.0	Monthly	May 2005
Labour Price Index	6345.0	Quarterly	Mar qtr 2005
Wage & Salary Earners, Public Sector	6248.0.55.001	Quarterly	Mar qtr 2005
Other labour surveys			
Employee Earnings & Hours	6306.0	Biennial	May 2004
Employer Training Expenditure & Practices	6362.0	Irregular	2001-02
Labour Costs	6348.0.55.001	Irregular	2002-03
Other publications			
Australian Economic Indicators	1350.0	Monthly	July 2005
Australian National Accounts: National Income, Expenditure & Product	5206.0	Quarterly	Mar 2005
Australian Social Trends	4102.0	Annual	2004
Australian System of National Accounts	5204.0	Annual	2003-04
Australians' Employment & Unemployment Patterns: First Results	6286.0	Irregular	1994 to 1997
Australians' Employment and Unemployment Patterns, 1994-1997: Expanded Confidentialised Unit Record File	6286.0.55.001	Irregular	1994 to 1997
Business Indicators	5676.0	Quarterly	Mar 2005
Census of Population & Housing: Selected Education & Labour Force Statistics	2017.0	Irregular	2001
Education & Training Indicators	4230.0	Irregular	2002
Employment Arrangements & Superannuation	6361.0	Irregular	Apr to Jun 2000
Employment Arrangements and Superannuation, Australia: Confidentialised Unit Record File	6361.0.55.001	Irregular	Apr to Jun 2000
General Social Survey	4159.0	Irregular	2002
Government Benefits, Taxes & Household Income	6537.0	Irregular	1998-99
Household Income & Income Distribution	6523.0	Irregular	2002-2003
Measures of Australia's Progress	1370.0	Irregular	2004
Regional Wage & Salary Earners - Electronic Publication	5673.0.55.001	Annual	2000-01
Superannuation: Coverage & Financial Characteristics	6360.0	Irregular	Apr to Jun 2000
Voluntary Work	4441.0	Irregular	2000

(a) Latest data available via the ABS web site, and on request, for June 2003.

(b) Latest data available on request for July 2001.

(c) Related data available from Labour Mobility.